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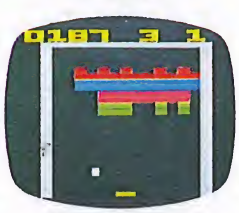

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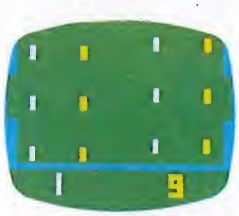

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SCORE!

Welcome to *Score!*, Australia's only publication totally devoted to home video and computer game playing. Electronic games are fast becoming our major home entertainment and we know that most video gamers just can't get enough information about the different programs and game systems. *Score!* is here to fill that gap and we hope you enjoy this premier edition. Good Playing!

Geoffrey Gold
Editor

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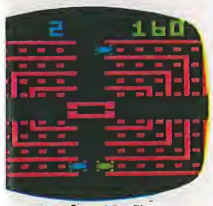

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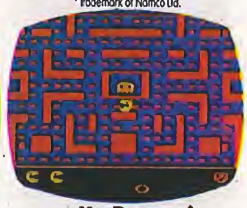

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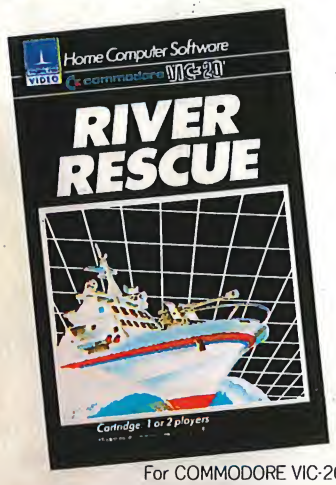

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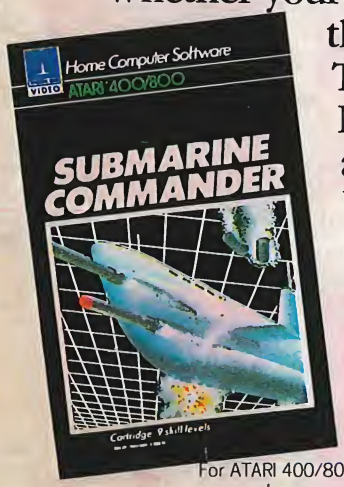

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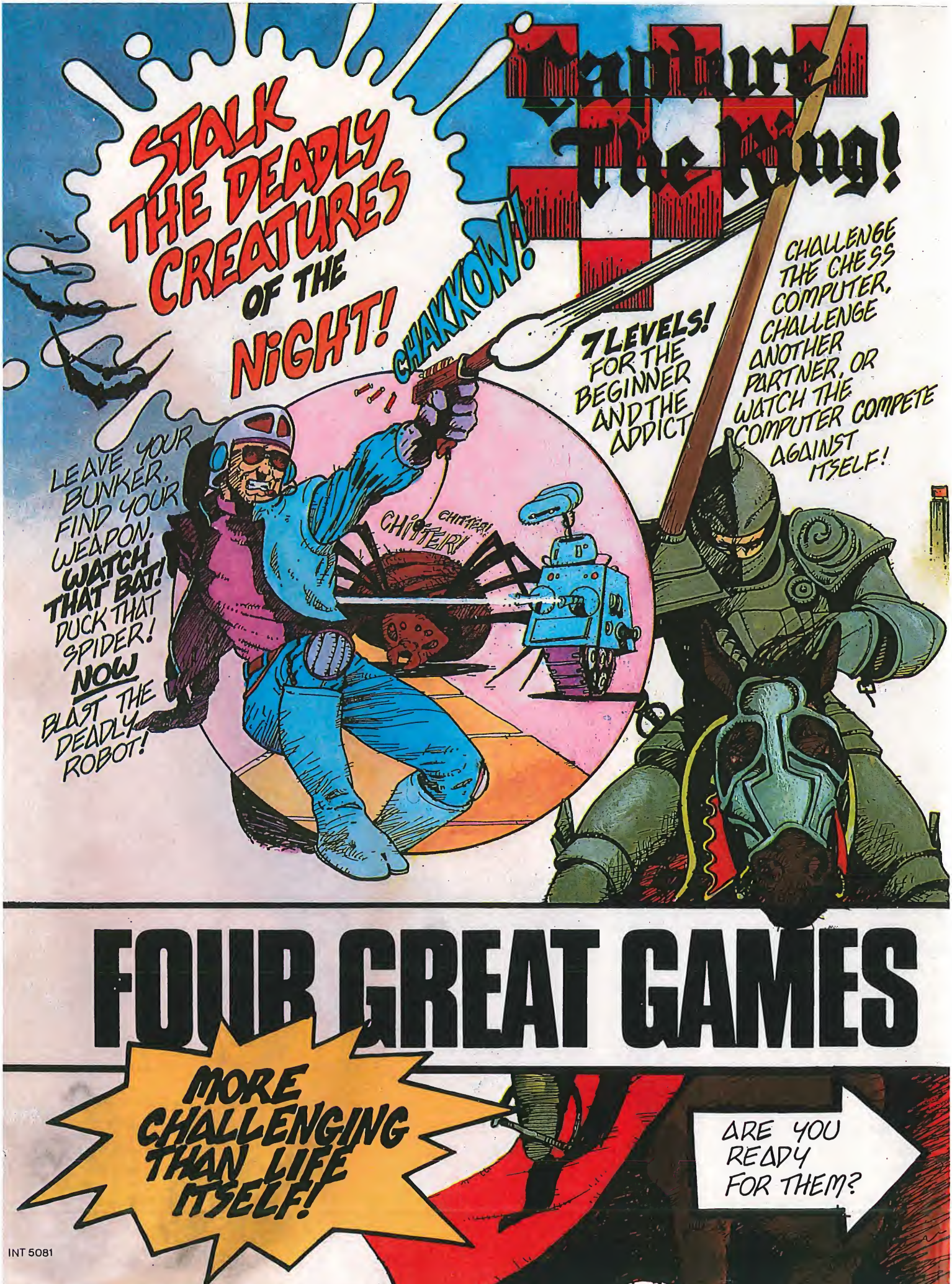
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3
'ain and Pleasure of Video Games
'ideo and computer games have replaced he humble television as the home's most ontroversial item. Doctors, teachers and olitícians around the world are arguing bout them. But who really cares? Ingrid 'rick-Loli reports.

14
Jur Great Game Reviews
Games. There are so many of them being roduced, playing them all would be a ull-time occupation! Here we present eviews of some of the best video and omputer games on release in Australia.

35
Video and Computer Systems
ust as video recorders come in different ystems so too do video and computer game layers. In this first section we describe the ree major video game playing formats – ne Atari 2600, Mattel's Intellivision and the BS ColecoVision.

44
Atari's Range of Home Computers
'ollowing the success of its earlier 400/800 ome computer systems, Atari's new 00/800XL range of computers is now on elease in Australia. We review the equip-nent and list the range of games available.

50
Commodore's VIC-20 and 64 Computers
The Commodore Vic-20 and 64 home computer systems are among the most popular in Australia. Vic Kater and Mark Lingane review both machines and we list the games available.

59
Video and Computer Game Accessories
Sharp shooting, fast playing electronic gamers are always looking for new equipment to improve their style and techniques. Here we review the growing range of accessories – from hand controls to plug-in, mini computers.

63
Where Does It All Come From?
A complete list of all the major video and computer games and equipment distributors.

65
The Ultimate Video Game
Video games, like most games, allow us into the world of fantasy. The kicks we get out of space wars and missile battles help us let off steam. But what about the real world of combat. Don Dennis provides a frightening insight into what might happen if the 'big-one' really did go off.

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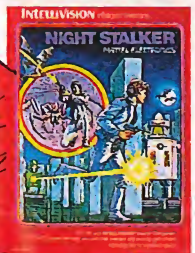

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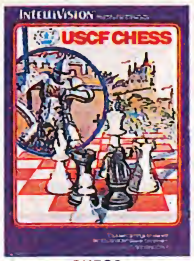

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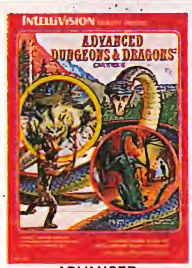

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THE PAIN AND PLEASURE

OF VIDEO GAMES!

Video and computer games have replaced the humble television set as the home's most controversial item. Doctors, teachers and authorities around the world are arguing about the merits — or otherwise — of electronic games. But who really cares? Ingrid Frick-Loli reports:

SILENCE, except for a maddening ringing and beeping, buzzing and banding. Discordant sounds, similar to the modern attempts of a struggling jazz band rather than the rehearsing of a quartet prior to performance. Darkness, except for flashing lights, weakening, then intensifying to occupy their own little space, then weakening again.

The scene, typical of many video centres in the world. The components, mainly teenage males with average intelligence and nothing else to do but play **Space Invaders** or **Asteroids** or any of the other newly introduced video games.

And that's the week-day exhibition when school is out or unemployment is sky-rocketing. But when the weekend approaches, the manifestation rekindles itself like an ingrown fire. Then, adults join in the fun. There are the beginners, the semi-addicts, the addicts and the pros.

The pros are the ones who leave their Atari video games at home to join the communal fun at a video centre in town. They have separate scores, one at home and one in here. They always try to reach new dimensions of height and frenzy. These are the ones who even skip school or quit work — or both. They're the ones who suffer from chronic dislocation of the right shoulder and left elbow.

The addicts are content to be second in line to the pros, because they'd rather go see a movie once every six months and take a break from the ideal goal score they set out to reach. They suffer only pasmodic intermittent pain to both wrists.

The semi-addicts keep trying to catch up, to climb the ladder of achievement bit by bit. They'd like their initials to be stamped forever in the hearts of the machines. Their complaint is the daily headache deriving from the repetitive noise induced by the games. The previous types don't hear a thing because their full attention is giving to tapping the controls on time.

Finally, the beginner is the one who spend the least time with these video games. He shyly looks around to make sure the experts aren't watching his feeble attempts to get past round one of the game objective. He has no pains yet.

While the pro spend up to 10 hours a

day playing and replaying at home, at these fun centres, with his gadgets, and invests all his money in the newest video game cassettes for television, automatically becoming the video retailers' best pal, the beginner is content to spare a coin every other coffee break.

The machine's best friend is the semi-addict who nervously keeps popping coins in for new games, attempting to reach the level of perfection his competitors have reached. As opposed to the pros who play for hours on the same game, he is the centre's real market profit and favourite guest.

Whether beginner or pro, everyone's prime intention is to beat the master mind, the computer.

But, as for all things, there are pros and cons to these video games.

One kid, within a Melbourne "Leisure & Allied Industry", exemplified a pro of the bitterly criticised video games confessing: "I play because it helps me release tension and daily pressure and . . . I can get away from my mother. I'm also bored, there's nothing else to do." On one hand it is best to let teenagers employ their time and energy in these games rather than on the streets in vandalistic acts.

On the other hand, another kid of 12 boasted of having played since he was eight and complained of sharp pain in his right shoulder. However, despite the discomfort, the youngster kept playing for another hour.

True, kids waste time playing video games instead of doing something more constructive like reading the same Robinson Crusoe their grandparents used to read, or playing hid 'n' seak as their great-great-grandparents used to play. But as the overpowering technological monster advances, its clutch similar to a hawk's, we must succumb to its talons, pleasant or unpleasant as they may seem.

On one hand, the video retailers and wholesalers join hands to praise the **Space Invaders** or **Donkey Kong** lords, patrons of all income. On the other, medical experts and recriminators despise the existence of such devilish inventions, fruit of all sickness. In the middle, the players, contend to penetrate a world of flashing fantasy and in some cases pain, to bury themselves in the dark, concave recesses of a video centre for hours on end.

One can just imagine a medical visit to Dr Oohmafiz by one of these players. "Well, how are you feeling today, Mr Gamesfield?" "Oh," he'd answer, "Apart from what you define as the prolonged back hypnosis syndrome and the nervous tic in my left eye and right cheek, the chronic headache and the occasional epileptic fit, I'm fine."

Then there is the teenage drop-out's smart reply to the anxious doctor's question. "I'd rather be in the computer world subject to concurred soredom, than in the scholastic world subject to incurred boredom."On a more serious note, the multiple cons are of medical, social and psychological nature. Some claim these games are extremely harmful.

The Malaysian government, for example, has been urged to follow the footsteps of the Philippines and Indonesians in banning video games. According to Martin Khor, a researcher with the Consumer Association of Penang, and top opposition to these pastimes, video games and gadgets are taking the place of more traditional games like "flying kites or top spinning." Instead of encouraging peace they are encouraging "violence, destruction, killing and racing".

His organisation claims that when some children run out of money they rob or cheat their parents to support their addictive appetite. And, in school, instead of paying attention to their teachers they tried to beat their highest scores. They'd rather follow the flashing lights of their rectangular gadgets than the flashing eyes of their aggravated instructors.

So, in Khor's view, besides being an educational impediment, video games are also a cause for social delinquency.

Despite these governments' intentions to maintain a conservative stance, video games are flourishing, or rather booming, all over the rest of the world.

The US Navy has introduced Navtag — Navy Tactical Action Game — to train junior officers in wartime tactics. For Commander Bob Owen, chairman of a Navy team testing the computer's educational effectiveness, the video game is a true teacher in that the officers can "experience the type of things they do at sea", like identifying the enemy, manouvering the ship or firing weapons.

But it's practical games which become the true dimension of reality — blood and death in real life eventually will substitute

flashing colors and sunken ships on the screen. There is no thin line between theory and reality! The question which arises is whether these games prepare the officers psychologically in the event of war.

Besides problems of social or psychological nature, video games seem to be the scapegoat for epilepsy as well.

According to Andrew McQuitty, a British doctor who works in Bahrain, the flashing sequences of battling tanks or vanquishing asteroids cause epileptic fits.

One 17-year-old year who had a previous non-video-related epileptic fit, suffered an attack while playing a game called **Dune Buggy**. Says McQuitty, it is known in medical circles that flashing lights such as disco strobes or a flickering TV can effect people who are susceptible to epilepsy.

This medical phenomenon even occurs in people who have no previous family record of epilepsy. He cited a case from the British Medical Journal of another 17-year-old girl who suffered from this malady after playing a video games called **Dark Warrior**. She played different video games for two hours a day, but only

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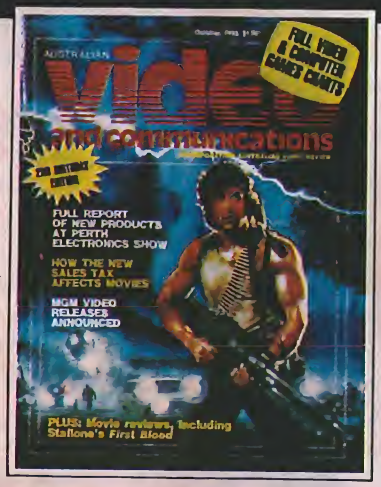

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THE PAIN AND PLEASURE OF VIDEO GAMES!

this particular game seemed to affect her. She had no such medical problems in either her or her family's medical records, so whether the sequence of colors particular to that game affected her movements or whether the warrior's evil spirit shot through the screen to penetrate her body is not known. However, the fact remains that not every video game she played affected her in like fashion. Only one of several.

Perhaps doctors should form a world-wide research centre to study in-depth the medical phenomena brought on by certain video games. This study could later lead them to identify which games are the cause of certain ailments.

To carry out such a scheme, doctors must have first-hand experience with these machines. But then again they could become addicted to **Asteroids** or **Pac-Man** themselves after conducting considerable "research".

But the pernicious video games leave scars elsewhere as well. Not only do they cut down physical fitness, but they tear through the recording companies' profits. CBS records has fired 300 of its professional staff and half of its regional staff across the US. Pop record sales have slumped and concert goers have turned their backs to Eagles, Break and Talking Heads in favour of the captivating video games.

Money which teenagers once spent on records is now being slipped into more and more computer slots. Video games are becoming increasingly diversified in nature, and are constantly rising in popularity at the expense of more traditional leisure industries such as the film, record or toy enterprises.

This summer, for example, during the big rock weekend Festival in California, to attract a lot of bucks and a huge audience, the sponsors organised a section on the concert grounds where fanatics could dwell with elaborate computer games.

Then again, the blame does not rest solely with video games. Record companies are losing profit also because many music lovers are turning to home-made recordings, whether they be made through a friend's album, or taped directly off the radio.

If doctors are complaining that video games are health hazards, and the record and film industries are upset because the games cut through their margin of profit, wait till they see what's in store for them.

Jack Mittel, president of Taito American Corporation, one of the major producers of electronic pastimes, say three-dimensional and quicker, more complicated games which will cater to the older folk are on their way.

In the end, however, the decision lies with the consumers. So, dear recriminators and medical experts, people are happy to incur pain as long as it;s their choice.

Some prefer the roller coaster folly which provokes early shrivelling of the intestines. Others prefer the video game ecstasy which provokes early signs of paranoia. To each his own!

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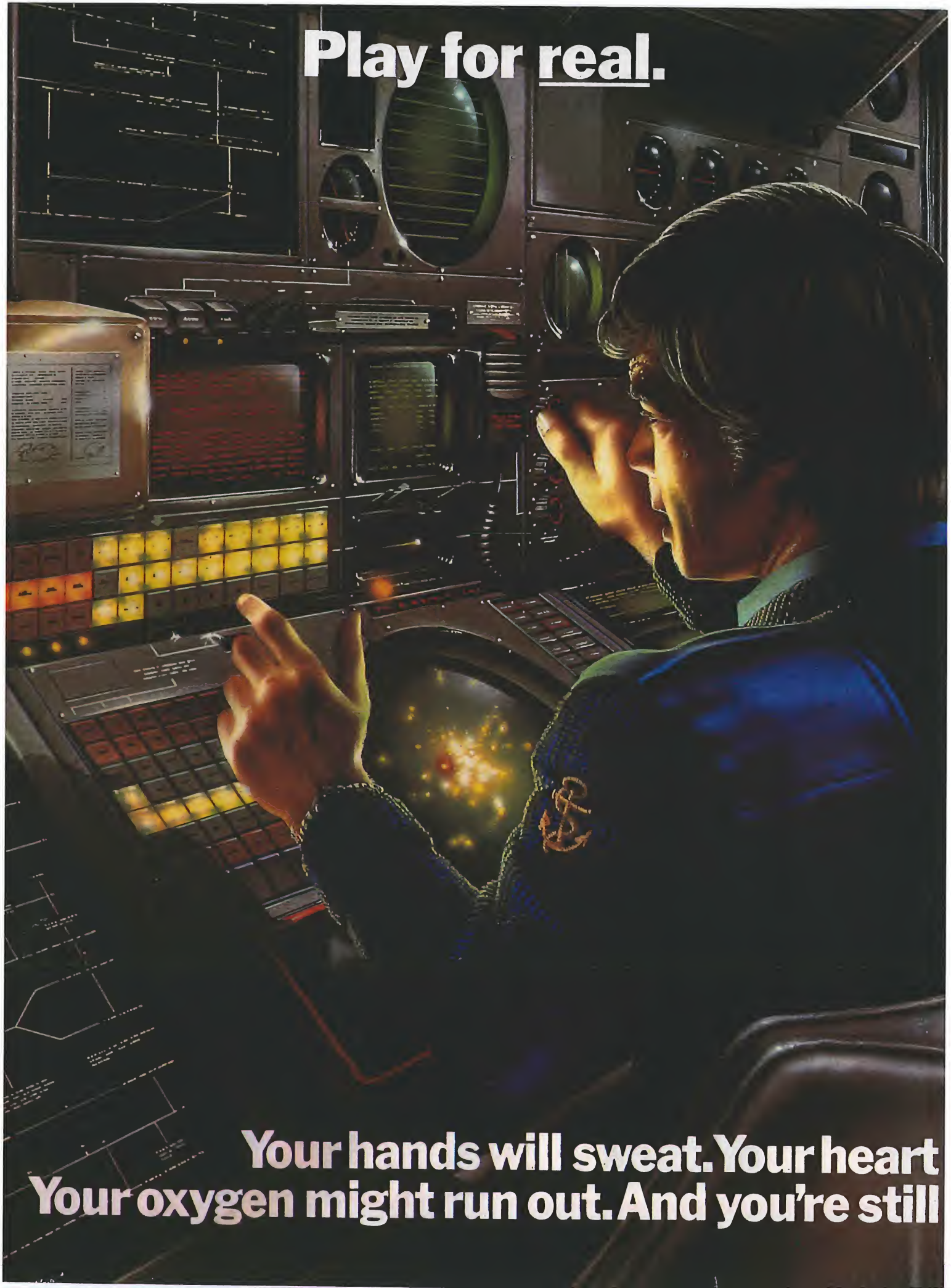
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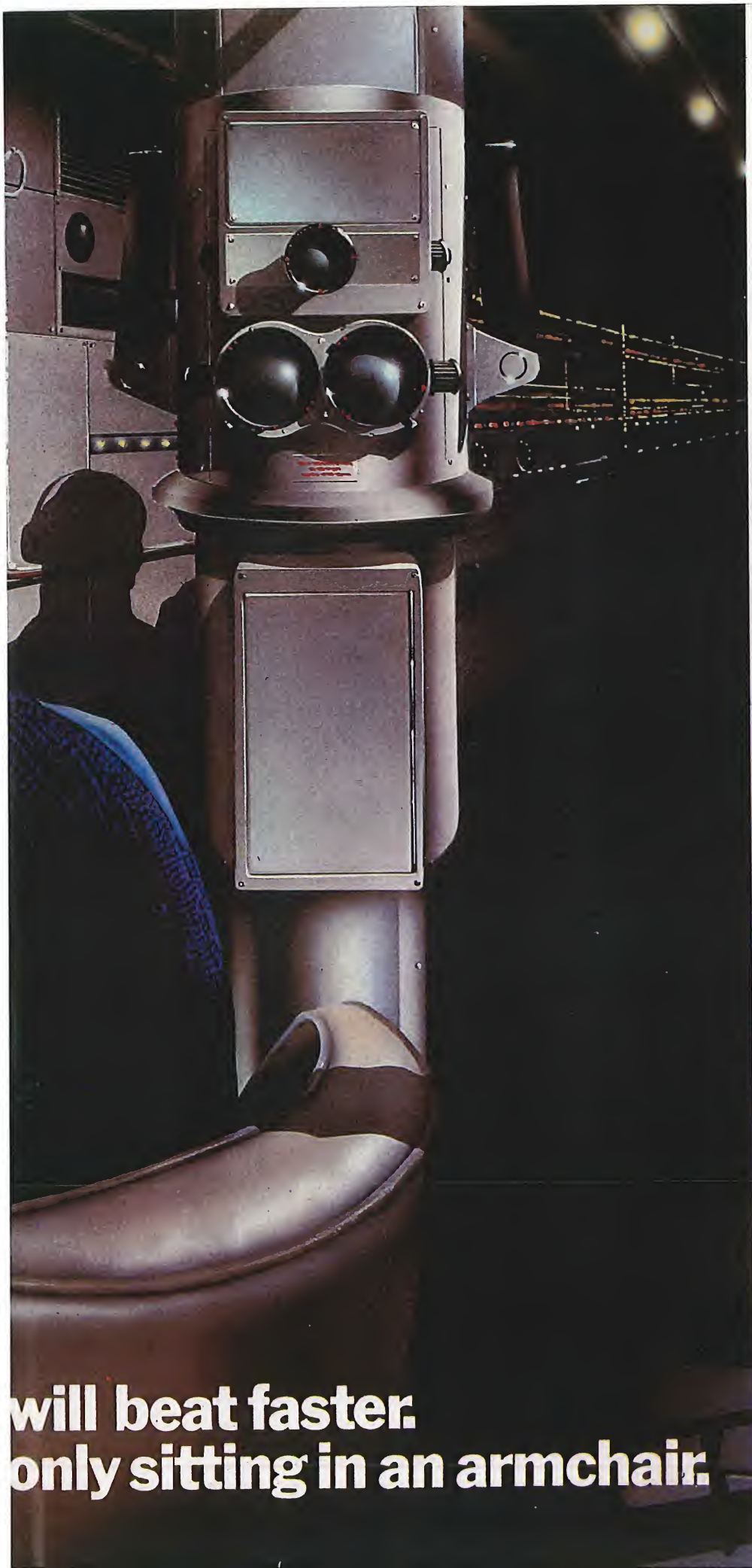

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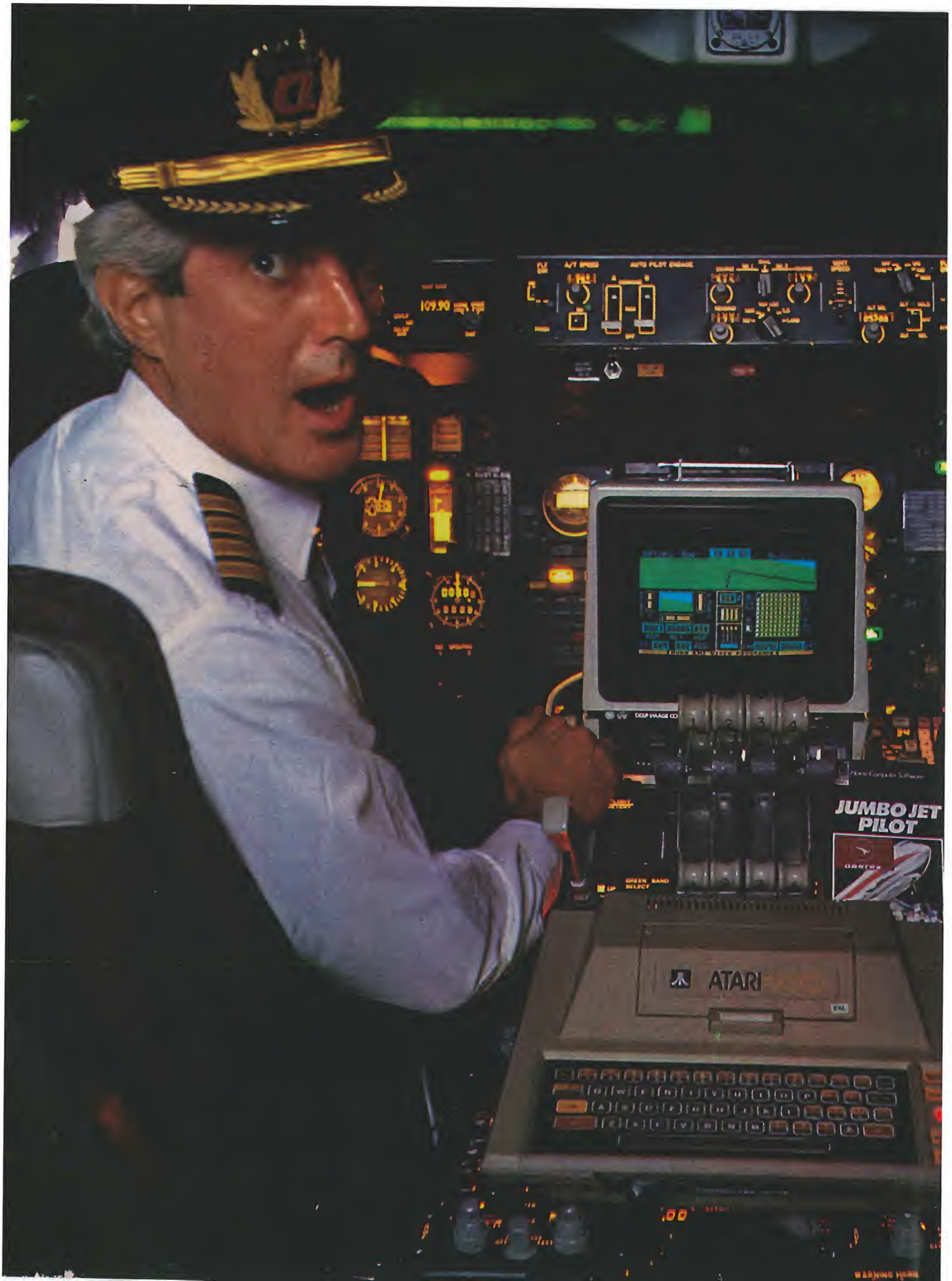
JUMBO JET
PILOT
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Games. There are so many of them being produced, playing them all would be a full-time occupation! Here we present reviews of some of the best video and computer games on release in Australia.

VIDEO GAME REVIEWS

HEY! Before you start racing through this section, let us explain to you what's happening out there amongst the game producers.

As you know, games have, in the past, only been produced to fit one video games system or another. So, a game produced for the Atari 2600 was never intended to be played on an Intellivision console.

Now, however, games producers have decided to see themselves as "software packagers" and they are happy to see their games being played on whatever system has a large enough public acceptance to make it economical.

This means that a game may be released first for, say, the Atari 2600 and then reworked to be played on the Intellivision and other games systems and on the increasing variety of popular personal computers.

Of course, the more processing power is packed into a games system or personal computer, the better the graphics and game play should be. The result — the same game may have the same theme, but details and action may be different to suit the system.

As well, some companies are now producing adaptors, that allow cartridges from one system to be played on another. ColecoVision, for instance, has an Atari adaptor and will soon release an Intellivision adaptor.

So as you read through these reviews remember: What's listed as a game for one system today, may be available for all the rest tomorrow!

Electronic games flying high! Here two Qantas pilots check out Thorn-EMI's 'Jumbo Jet Pilot' game on an Atari home computer while seated in Qantas' multi-million dollar 747 flight simulator in Sydney.

VIDEO GAME REVIEWS

DREAM CITY

ATLANTIS, an Imagic game distributed by Imagic Australia for the Atari 2600, Intellivision and Philips G7000 video games systems and the Commodore VIC-20 personal computer.

Atlantis is the mythical city that disappeared during Europe's Dreamtime. In this game, you discover that it was destroyed by unrelenting attacks by Gorgon space fleets.

Your job is to command the Atlantis defences against the Gorgons and to do this you have at your disposal the city's laser gun stations. The number of laser defences you have at your disposal varies according to which system you are playing on but what you do with them doesn't.

You must shoot and destroy the Gorgon fighters as they pound the city as any that survive your defence return at a lower altitude and their fire is more deadly. At their lowest flight level, their weapons knock out the first part of the city they pass over — unless you can destroy them first.

The battle can rage through day and night and the days are counted off on the screen.

At the end of the game, when **Atlantis** is completely flattened, the city's survivors leave their stricken home in a flying saucer and reappear again in another Imagic game, **Cosmic Ark**, where they seek a new homeland.

PATROLLING PIGS

AMIDAR, a Parker Brothers game distributed by Parker Brothers for the Atari 2600 video game system.

In **Amidar** you are a gorilla in a maze — well, it is a change from being a space pilot — and you are chased by angry warriors who want to do you in.

As you criss-cross the maze your movement colors-in the borders and eventually fills-in the spaces between the borders. If you are successful in coloring the whole maze you spring to the next level.

Here you become a paint roller chased by patrolling pigs (how quaint!) and you start all over again.

The object of the game is to avoid your pursuers and collect points by blocking out the various mazes.

Amidar is a game that's not particularly difficult to master. However, its easiest levels are entertaining for the real beginner and should provide hours of entertainment for younger members of the family.

FAST CARS

AUTO RACING, a Mattel game distributed by Mattel for the Intellivision video game system.

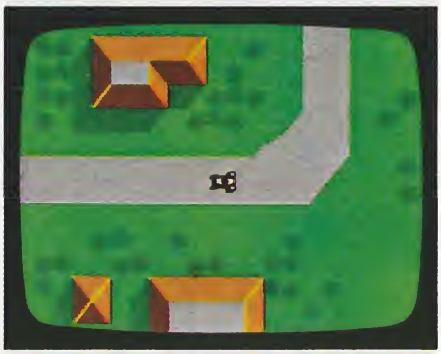
Mattel's **Auto Racing** offers five grand prix racing circuits and a choice of five racing cars. The variations are endless as each car (except the blue and tan, which have equal abilities) has its own strengths and weaknesses.

The cars automatically accelerate to maximum speed and, to negotiate the various twists and turns of the track, players must both steer with the direction disc and apply brakes with the hand control's side "firing" buttons.

Only perfect steering will get you safely around the circuit. Under and over-steering will force you off the road, under-braking will cause you to spin off at corners and over-breaking will allow your competitor to sneak the vital seconds necessary to win each frame.

As the player moves through the course, the sounds of the accelerating engine and screeching tyres can be heard. The graphics are clear enough, although when you're concentrating on keeping on the road you are not so worried about whether the tree you're about to hit is quite natural or not.

In two-player races the first player to clock-up 50 points is the winner. When playing alone it is against the clock.



FLYING HIGH

BARNSTORMING, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

The title of this cartridge comes from pre-war days when the owning and flying of a bi-plane did not require a licence, so anyone with enough money for their own plane could become a pilot. Many of them used to fly around the States and land on farms where they would give the farmers joyrides in return for the use of a barn to sleep in. This was known as barn-storming.

In the game, you are the pilot of a yellow bi-plane and your task is to fly through a number of red barns — how many depends on which game you're on. This simple-sounding task is hindered by wind towers that block the way and flocks of geese that fly in front of your plane.

You use the joystick for this cartridge and the action button is used to start up the plane and — once it is airborne — to accelerate, which is an unusual use of what is normally referred to as the "fire" button.

The game is played against the clock and you have to fly through each barn you come to. Every time you do, one point is deducted from the barn count. In Game One you have 10 barns to fly through along a fixed course. A good time for this is about 33 seconds, which means you have to fly at top speed and not collide with anything. Hitting a barn or wind tower slows you down by about two seconds and colliding with geese slows your engine down, so you have to accelerate again.

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The graphics are very good, and a lot of little touches have been added, such as the pilot's scarf flapping in the wind behind him. The sound effects are reasonable but not brilliant and the control is also quite good.

It should provide many hours of fun trying to get a decent time on Course One alone, which is only one of four variations on this cartridge.

GRAND SLAM

BRIDGE, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

For those Bridge fans who like more problems than those offered by the Sunday newspapers, Activision's **Bridge** is a super buy.

The game is designed for those who already know how to play the game. It won't teach the basics but it does give virtually unlimited opportunities to practice what is already known and allow you to sharpen your wits.

Hook up your video game system, switch on, and you and your computer "partner" are off for a "killing". The computer insists on a Standard American system of bidding and uses Stayman and Blackwood conventions where appropriate to bid with you to a contract. There's no trouble from opponents as they don't get to bid.

By adjusting your game select switch, you can decide to play a part game, game or slam-type hand. Press the reset switch and only our hand is visible at the bottom of the screen.

You select your bid with the joystick and when the bid option you want flashes on the screen, you push the joystick fire button to lock it in. Your computer partner will then respond. Consult details of partner bids in the game's booklet for a full explanation.

You then keep bidding until either you or your "partner" passes. The last bid becomes the contract.

When the contract is finally established four things occur: 1. The contract bid is displaced in the top right hand of the screen; 2. Your "partner's" hand appears (since one of you is now "Dummy"); 3. The upper left corner of the screen shows how many tricks you need to make your contract; and 4. the opponent to the left of the declarer leads a card from its hand. The game thus begins in earnest.

At this stage you can also opt to play a hand by selecting a desired contract and you can even "spy" on your "partner's" hand by slipping up the difficulty switch to "a". But, of course, Bridge players never want do that, do they?

When playing a hand you become the declarer and your computer "partner" switches side and plays the cards against you.

Your move your joystick until the card you want to play flashes. Press the fire button and the card then appears in the middle of the screen. After all cards in the round have been played, the winning card starts flashing. Press the fire button and continue.

After the last trick has been played, you push the fire button again to clear the table. Your bid will appear just above your hand and the number of under or over tricks will be displayed. A zero means you made your bid exactly. Nicely bid and played.

If you booboobed, you can play that game over and over again. In fact, if you notice you made a mistake early in the game, you can start over again by finishing the last trick and then pull the joystick back while pressing the fire button.

There's no need to get aggravated at all. There are no special tips on how to beat the game either. It purpose is to let you have fun running through a wide variety of bidding and playing situations without having to get a Bridge group together. Saves friends.

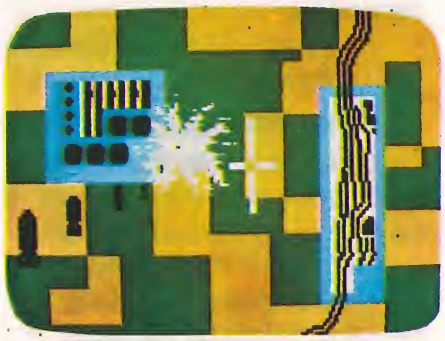
BOMBS AWAY

B-17 BOMBER, a Mattel game distributed by Mattel for the Intellivision video game system. Intellivoice component required.

As the title suggests, this game is set in World War Two: Europe, 1943, to be exact. You are the Captain of a B-17 bomber and your mission is to bomb as many targets as you can before you and your plane are taken out of action by the enemy.

You are given an on-screen map of the continent, showing exactly where you are and where your targets are. The voices are your crew, who inform you of any trouble — for instance, you might hear "Bandits at 9 o'clock" to indicate an enemy aircraft attack. The crew will also tell you when your targets are in sight (these will either be anti-aircraft guns, landing strips, warships or industries, the latter being worth the most points). This is quite a complicated game but the instruction booklet is pretty comprehensive. It tells you exactly how to be a pilot, navigator, gunner and bomber — all at once.

I really enjoyed this cartridge as it had an original theme to it as well as good graphics, sound and use of the voices. This one should provide may hours of fun.



MELT DOWN

CHINA SYNDROME, a Spectravision game distributed by Videoactiv for the Atari 2600 video game system.

"Warning — once the melt-down simulation begins you cannot reset; you can, however turn your machine off in desperation."

That's the inspired introduction you read in the instruction booklet to **China Syndrome**, a game that brings to video-gaming the same sort of fears about a melt-down at a nuclear power plant as the movie of the same name.

In the game, you have a problem with your local nuclear plant. The core has been damaged, radio-active particles are loose and a melt-down threatens. You know what comes next ... mushroom clouds, total devastation and so on.

The game play is as follows: Your screen showns you the various nine levels of the nuclear core and indicates the radiation levels on each one.

Your joystick controls a robot arm that scoops up the radioactive particles before they increase.

The more successful you are, the quicker you get through the levels — but the radiation keeps increasing and you can get sucked down vacuum fans.

The game finishes when you've either cleaned the radioactive particles up in time — or when time's run out.

At the end of the game you get a rating. My first go told me "Try another profession." The game's an interesting concept and will appeal to many. If my decision was based on employment prospect, however, I think I'd probably try solar energy.

AIR POLLUTION

CLOUDBURST, a UMI game distributed by Imagineering for the Commodore VIC-20 personal computer.

Cloudburst is a fast-paced, multi-level, **Space Invaders** style game using an anti-pollution theme. You are positioned in a tank along the bottom of the screen and your role is to destroy a series of mutant creatures that drift down the screen to ground level.

The mutants are the result of a heavily polluted atmosphere and dwell in the clouds. These "Cloud Hoppers" free-fall to earth along with deadly Acid Rain and mount attacks on your defence base.

The one advantage the Cloud Hoppers have over the older Space Invaders is that once they land, they can move horizontally along the ground. In return, your tank also has the ability to fire up or left or right.

Of course, any contact with the Acid Rain or the Cloud Hoppers is fatal.

The game begins with you operating one tank with two in reserve. You gain 40 points for destroying Acid Rain, 30 for a Cloud Hopper in the Air, 20 for one on the ground and 10 for any Cloud.

Scores increase as your clear the screen and move to higher and faster levels of action.

As with most VIC-20 games, you can use either the joystick or certain board keys to control the action. With the joystick, push left and your tank moves to the left, right and your tank moves right, forward allows you to move left or right but shoot straight up; back locks the tank so you can shoot left or right without moving.

Firing is controlled by the fire button which can be held for rapid fire.

The keyboard control is rather less flexible. The CRSR key moves you left, the CRSR left/right key moves you right and the left SHIFT key locks you in one position. The Space Bar shoots in the direction the CRSR keys are pressed or otherwise shoots straight up.

You can select levels 0 through 9 to begin with then play your way up through the higher levels by clearing the screen.

Wherever you start, the action soon becomes fast and ferocious. The simple sounds and graphics don't get noticed as this is one hell of an action game.

If you are after a game that leaves you little time to breathe, **Cloudburst** should be high on your shopping list.

HOSTAGE RELEASE

CHOPLIFTER, a Creative Software game distributed by Imagineering for the Commodore VIC-20 personal computer.

If former President Carter had owned a Commodore Vic-20 home computer, his ill-fated attempt to rescue the American hostages in Iran may not have failed. For with **Choplifter** he would have got alot of practice rescuing his diplomats before he set his task force off on its way to Teheran.

In **Choplifter** you must pilot a helicopter past tanks, jet fighters and killer satellites to get to the hostages. After landing and picking them up, you must return them safely back to the closest US base (perhaps Pine Gap?).

The graphics are amusing. When you land your chopper, the hostages run along the screen and hop aboard. When you get to the base they happily jump out and run into the base.

While you are trying to find the hostages, your helicopter has to dodge attacks from fighter jets and anti-aircraft fire from tanks. They are quite easy to avoid but the real trouble comes from killer satellites. They are clever trackers and must be destroyed.

Once you're picked up all the available hostages, you must then release more of them by breaking into enemy prisons. This is far more difficult, particularly as you need to hover over the prison. Your stationary helicopter provies to be a juicy target for the enemy defence.

The computer joystick controls the movement of the helicopter while the fire button activates the chopper's defences. The Vic-20 joystick is not particular responsive but this shouldn't lessen the interesting features of the game.

CHOP. CHOP!

CHOPPER COMMAND, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

You're a helicopter pilot defending a convoy of ammunition trucks in **Chopper Command**, Activision's earthbound version of **Defender**. Designed by Bob Whitehead (of **Boxing, Skiing** and **Stampede** fame), this game is involving at each level and certainly one to be treated as a true challenge.

The player flies a helicopter over a desert scene defending a convoy of nine trucks from increasingly aggressive waves of enemy fighters and helicopters. The playfield moves left and right and you are equipped with a terrain scanner that helps you plot the positions of enemy aircraft and your own trucks.

You gain 100 points for each helicopter you down and 200 for each jet. But the big scores result from the bonuses after a complete wave of 12 enemy aircraft has been wiped-out — 100 times the number of undestroyed trucks remaining in the convoy times the wave number. Thus a bonus in wave 10 could be as high as 9000 points.

Chopper Command can be played by one or two players at "Cadet" level or the "Commander" level and your lasers can be fast or slow. From Wave 3 on, the "cadet" game is extremely fast. The "Commander" level game is extremely difficult from the start.

Superb graphics and challenging game-play will ensure that you'll be playing **Chopper Command** along after its initial purchase.

EYES SHARP

DEFENDER, an Atari game distributed by Futuretronics for the Atari 2600 video game system.

Defender is probably the most complicated arcade game ever.

The reason there has been such a demand for this blockbuster is its sheer complexity. Atari's task was to squeeze a 26K game with five buttons and one lever into a 4K machine with only one button and one joystick controller — and they've managed it.

Visually, the arcade and domestic versions are astonishingly similar considering the memory difference (don't be put off by the unflattering pictures you may have seen; it doesn't look as bad as that). The sound effects are not too similar, but passable nevertheless, and the gameplay itself is very similar. The only real difference is that there are only five "Humanoids" instead of 10.

I shan't describe the game itself for two reasons. Firstly, those who don't know the ins and outs by playing the arcade version will be able to pick it all up be reading the excellent instruction book. Secondly, it would take up a whole article just to explain it.

I shouldn't think that any lover of the arcade game will be disappointed with this version. The action has been faithfully captured by Bob Polaro, the programmer, who I think deserves a mention for this effort.

SPACE NASTIES

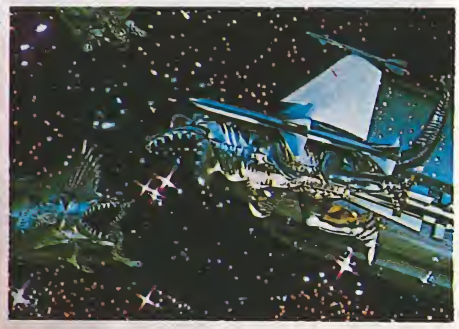
DEMON ATTACK, an Imagic game distributed by Imagic Australia for the Atari 2600, Philips G7000 and Intellivision video game systems and the Atari 400/800 and Commodore VIC-20 personal computers.

Demon Attack is still Imagic's best game. It does vary in content between the various systems but, essentially, the theme is an improved, updated version of **Space Invaders**.

In the Intellivision version, you control a laser gun on moon-base with an outline of Earth appearing as the backdrop. Three pterodactyl-like demons attack from the tip of the screen in successive waves. When they are eliminated a new form of demon appears. They are paired together and you need to hit the double to be able to knock them out independently. After these attackers are gone, waves of birds attack and, when they too have been finished off, your gun turns into a rocket and you set off to destroy the alien's base ship. Here you have to dodge new demon defenders and wear-out the ship's force field. After that you have a chance of shooting through a moving tunnel on the bottom of the ship (like in **Star Wars**) to blow the ship up. You then return to moon-base and start again.

In the Atari version the game is simpler. You have the successive wave of demon attackers but if you wipe them out you don't get a free space ride. Beginning with the ninth wave of demons, the game gets intense. The demon's bombs and lasers bend towards your laser.

There are nine programs on the Intellivision cartridge and 10 on the Atari, making **Demon Attack** a much more adventurous game for those who cut their teeth on (and still play) **Space Invaders**.



MONKEY BUSINESS

DONKEY KONG, a Coleco game distributed by CBS Electronics for the ColecoVision video game system.

At last **Donkey Kong** is available in Australia for home video game playing. No longer will it be the domain only of the arcades and hand held electronic toys! And the Coleco cartridge is probably one of the best video game version we'll be seeing for a long time.

As with all other versions, **Donkey Kong** features Mario, the brave little carpenter who must rescue his girlfriend from the clutches of the great ape Kong.

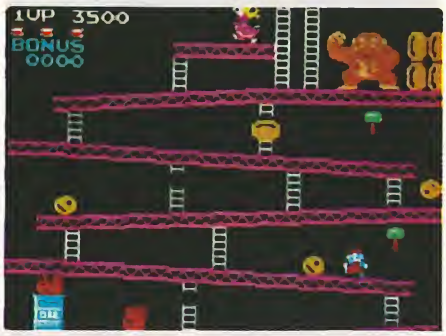
There are three basic screens in **Donkey Kong**. In the first, Mario tries to reach his girl by climbing ladders and jumping barrels and fireballs. In the second, he must remove riverts from steel girders while avoiding three ghosts. And, in the third, he has to jump on and off moving objects. If he gets through the third screen, the second screen reappears again but the action is at a faster pace.

Mario is directed by the ColecoVision joystick. Pushing it left or right will move Mario that direction. Push it up or down will make Mario climb up or down ladders. Pressing the left action button will make Mario jump.

The joystick is not as sensitive as one would like, but you soon get the hang of the movement.

Practice will also give you the best idea about tactics. Points are gained both by completing the screens and by avoiding or destroying various obstacles.

Whatever game pattern you choose, **Donkey Kong** will keep you at it for a long time. It is a video game classic and deserves all the praise it has received.



KNIGHTS OF OLD

DRAGONFIRE, an Imagic game distributed by Imagic Australia for the Atari 2600 and Intellivision video game systems.

This game is available for both the Atari 2600 and Intellivision systems and, although the theme remains the same, the Intellivision graphics are better while the Atari hand controls are easier to use.

Whatever the system format, **Dragonfire** is an involving game. The scene is a castle drawbridge over which you must send your video hero before entering the domain of the dragon. To cross the drawbridge you must duck under high fireballs and jump over low ones. If you're hit, you land in the moat.

If you get across, you are in the castle keep and here you gain points by collecting royal treasures while avoiding fire shot from the mouth of the marauding dragon. After collecting all the treasure, you escape to cross the drawbridge again at a harder level.

The game has 16 levels which you can try to tackle from levels one or from a number of higher levels. In the Intellivision version, level five introduces you to the drawbridge guarded by an archer who complicates your tactics of avoiding dragonfire by shooting arrows at you. At level 11, the dragon becomes invisible!

Because of the variety of skill levels, most video players will enjoy their introduction to **Dragonfire** and I suspect, it will become a long-term favourite for many.

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CLUTCH DOWN

DRAGSTER, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

Dragster is primarily a game of eye and hand co-ordination. It presents a screen with two horizontal drag tracks with a dragster ready to roll on each. The game has two difficulty levels and one or two contestants can play.

When you play alone, you compete against the clock to beat the recognised record of 5.74 seconds. When two play, each competes for the faster time.

Your joystick controller is both your clutch and gear stick, the fire button is your accelerator. To shift gears you push the joystick to the left "clutch" position and "shift" by letting the joystick spring back to the centre. You have to proceed through four gears and you can't down shift.

With the object of the game to build maximum speed by quick clutching, shifting and acceleration through all gears, keeping your eye on the screen tachometer assists you in reaching peak power at each gear level.

The game's level two adds the extra challenge of steering while driving.

Both difficulty levels share problems such as the engine blowing up because of over-revving or losing time because of a sluggish engine caused by shifting gear too quickly.

Dragster is a specialist interest game with a high skill demand.

FRIENDLY ALIEN

E.T., an Atari game distributed by Futuretronics for the Atari 2600 video game system.

So you saw **E.T.**, read the book, ate the ice-cream and now want to play the video game. Well, watch out. Atari's **E.T.** is no easy pick up and play game.

It's a real adventure that takes time even to master the basic level.

As in the film, **E.T.** is lost on Earth and needs to put together a telephone to phone home. Elliot is there to help him and, on the various skill levels you can introduce a scientist and FBI agent a hinder **E.T.'s** attempts to get his act together and leave Terra Firma.

E.T. begins the game with energy points which get used up as he moves around the various zones. He can use his super powers to get himself out of ditches, call Elliot, phone home or escape quickly from one zone to another, but these actions cost dearly in energy points.

E.T. has go to find and assemble his phone's missing parts, call home and get to the landing site before the energy runs out.

It's a lot harder than watching the film and most people I know are still at Game One level. However, it's a challenge if you're really into the movie characters and, surprise, no one meets a violent death!

TAKE AWAY

FAST FOOD, a Telesys game distributed by Computer Classics for the Atari 2600 video game system.

Fast Food is not a game for Weight Watchers. Its play encourages you to eat as much junk food as possible. It is almost McDonald's gone mad!

You are present on the screen in the shape of a mouth and you gain points by consuming burgers, french fries, milk shakes, icy poles, gerkins, pizzas and so on. You only have to avoid eating purple pickles. Eat too many of them and the game is over.

Scoring is achieved through the calorie count. The higher the calories you consume, the better the score. If you succeed in clearing the speeding junk food during one round, you are allowed a pause in the action to digest it all. Then the action picks up again at an even faster speed.

Fast Food is a fun game — very much enjoyed by the younger player. And if you're on a diet, playing this game may turn your stomach and swear you off of food forever.

CHOOK STORY

FREEWAY, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

FREEWAY is a game that has proven highly popular among younger players interested in a good challenge.

Its format is based on the old line of the chicken crossing the road, although, instead of the road being your traditional country lane,this little fowl has to make its way across a 10-lane freeway.

The aim of the game is to get the chicken across the road while avoiding speeding cars and trucks. Speed is essential for points for there is a time limit within which you have to maximise your score.

Freeway is impressive in its simplicity. You really do have to co-ordinate your sight and hand reactions. Its cuteness makes it a winner with the younger player.

And it does give you the best answer to that old riddle — the chicken crossed the road to pick up points, dummy.

FROG JUMP

FROGGER, a Parker Brothers game distributed by Parker Brothers for the Atari 2600 video game system.

Frogger is a near duplicate of its arcade game original, and just as much fun. As a video game, it's almost an extended version of **Freeway** with, instead of a chicken crossing a road, you have a frog crossing a road then leaping across a river by way of floating logs.

The river is crammed with all sorts of frog devourers such as turtles, alligators and snakes.

The object of **Frogger** is to hop as many frogs to safety as you can and to score the most points along the way. Extra points are gained by Mr Frogger saving lady frogs and by catching flies.

Frogger's graphics and music background are bright and entertaining and the game has the additional benefit of being able to be played by one or two players at a time. An excellent family game.

DEFEND EARTH

GORF, a Commodore game distributed by Computer Classics for the Commodore VIC-20 personal computer.

Your mission: The Gorfian Empire is trying to destroy Earth's defences (not again!) and you must wipe out the Gorf forces before they overpower all the fighters under your command.

The Gorf fleet is composed of Droids, Laser ships, Attack ships, Space Warp fighters, Flag ships and the Gorfs themselves. Each Flag ship sends four attack waves.

You must engage each Flag ship and its attack waves until you are overcome. You will be rewarded with promotion in rank based upon how many attack forces and Flag ships you have prevented from reaching Earth. Too bad you're already dead!

All this and more for a game that appears on first playing to be a graphically poor version of Space Invaders.

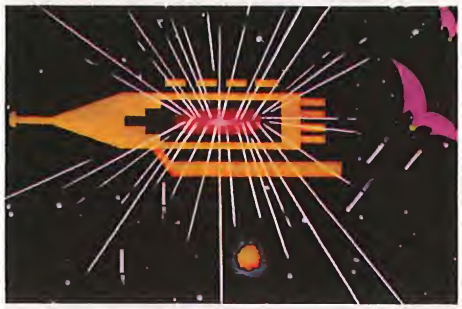
Fortunately, **Gorf** is a good playing game that overcomes its visual poverty by a variety of different action screens.

The first screen begins with an attack by **S.I.**-style space ships. A forcefield between you and the attackers destroys the occasional missile from both sides and then disintegrates.

If you succeed to destroy the wave (you gain bonus points from shooting down superior Gorfian ships as they pass overhead), you then move to the second mission which pits you against attacking squadrons of **Demon Attack**-style alien ships.

The third mission is a **Nexar**-style screen where Gorfians swirl out of a central vortex. The final mission pits you against a massive battle ship that has only one vulnerable spot. You have to keep firing away until your lasers cut through to the ships engines and it explodes.

After completing the fourth mission, you move on to repeat the cycle against even more powerful Gorfian forces.



PUCKING AROUND

HOCKEY, a Mattel game distributed by Mattel for the Intellivision video game system.

Mattel's **Hockey** game for its Intellivision home video game system continues the company's excellent record in sporting video games.

As with other Mattel sports cartridges, a prior knowledge of the sport's rules is a decided advantage in tackling the video game itself as Mattel's programmers have gone to great lengths to make the game as realistic as possible.

However, a good reading of the instruction book — and a bit of practice — will introduce most enthusiastic videogamers to Mattel's version of the game.

The game is played by two teams of five players and a computer controlled goalie on each side. The teams score by hitting the puck into the opposing team's net using sticks. One point is awarded for each goal scored. Only the goalies are allowed to actually handle the puck — all other players are restricted to using sticks.

With overlays for your hand controller, you can choose any of the four game speeds and move your players into any of 16 directions. Your hand controller fire buttons allow you to shoot or pass the puck between players.

The excellent graphics and computer involvement in the game is highlighted by features such as 2-minute penalties for rough behaviour and simulated noises such as crowd roar, ref's whistle and contact "whack."

With all of this — and real sports action — **Hockey** is excellent value.

ORAL FANTASY

JAWBREAKER, a Tigervision game distributed by Videoactiv for the Atari 2600 video game system.

Jawbreaker is an amusing video game with **Pac-Man** undertones. It's designed to be played on the Atari video games system and it's worth looking at if you like maze-style games.

In **Jawbreaker** you guide a set of teeth through a series of parallel lines. The tunnels between the lines are meant to represent a candy factory filled with candy bars, sliding doors and smiling faces.

The smiling faces are really bullies who'll knock your teeth out if they catch you.

If you succeed in avoiding the faces and eat all the candy, you go to a higher level. Your immediate reward for clearing the board is a toothbrush that pops out to brush your teeth before the next munching round.

Like **Pac-Man**, vitamin pills appear which give you extra energy to turn the tables and munch the bullies.

Jawbreaker has three game levels and it's best to describe it as a usefully entertaining family game.

ROCK STARS

JOURNEY-ESCAPE, a Data Age game distributed by Computer Classics for the Atari 2600 video game system.

It has to happen. Once there was a video game based on **Tron**, the movie about video games, there had to be a game based on that other symbol of youthful virility, rock 'n' roll. So, from Data Age comes **Journey-Escape**, the world's "first rock 'n' roll video game".In this game you are out on the road with America's "hottest" rock

Journey band members through a continuous onslaught of groupies, promoters, photographers and stage barriers.

The game starts with waves of groupies (hearts with legs), promoters (heads with shifty eyes) and photographers (flashing lights) streaming down from the top of the screen. A brief and inadequate parody of the Journey track "Don't Stop Believing" plays in the background as you get the opportunity to change the background color from plain to "strobing stage lights."

One or two players can play and the Atari's difficulty switches are used to provide novice or expert speeds.

At the start of the game, you receive $50,000 and 60 units of time. You must then take each of the five band members up the screen to their escape vehicle before the time elapses. Each time you're stopped on the way your lose time and money. For instance, being stopped by a groupie costs $300, by a photographer $600 and by a promoter $2000.

Each time you contact a Mighty Manager (he wears a crown on his head) you gain a bonus of $9900 and he gives you a quick, clear run through the crowd.

If you make it to the escape vehicle before the time elapses, any extra time is added to the escape time of the next band member. If, after all members are clear, you still have time available, that is converted to a bonus of $100 for every unit of time.

Once you've got all band members to safety, the game begins again with an extra $50,000 added to your rock 'n' roll profits.

That's essentially **Journey-Escape** and, if it wasn't for its ambitious theme of connecting videogames with rock 'n' roll, it would be judged as a reasonably interesting skill game.

Despite the rock 'n' roll, however, the game's graphics and sound are sparse and simplistic and there's no attempt at realism.

Overall, the glamor of the music industry isn't translated as it could have been but the game still has its attractions — particularly for the younger and less experienced groupie.

747 FUN

JUMBO JET PILOT, a Thorn-EMI game distributed by Thorn-EMI Video for the Atari 400/800 personal computers.

I suspect is is a common dream to be able to sit in an aircraft simulator and pretend a pilot a modern jet airplane. Indeed, the photograph appearing on page 14 was taken inside Qantas's million dollar pilot-training simulator in Sydney.

The closest you can get to the simulator, in your own home, is **Jumbo Jet Pilot** from Thorn EMI. We've been told that this game is so realistic that at a recent computer show some visiting pilots were pulling their hair out trying to get their jumbo jet off the ground.

Thankfully, I don't have to fly a real plane because, on my current record on this game, I would be a flying disaster.

So, turn your Atari computer on and select one of five skill levels. Then press Option to choose between a day or a night flight. Press Start to begin the game.

The first thing you see is the aircraft instrument panel incorporating a view through the cockpit window and 20 instrument indicators. An alternative screen is a map which provides you with an enlarged view of the airport you are leaving, the airport you're to land on and the terrain you're flying over.

Obviously, the first problem is to get off the ground and to do this you have to combine elevators and nose wheel, throttle and brakes.

Taxiing to the take-off position is tedious. The aircraft seems to take for ever and, while the instructions caution you not to, the temptation is to throttle-up and skid the plane around the airport like a rally driver.

Once you are ready to head for the sky, here's how the instruction book tells you how to proceed:

"With brakes applied and the aircraft stationary, increase the throttle setting to maximum. Set the elevators to just below the central position, release the brakes and steer the aircraft to keep it in the centre of the runaway. Watch the airspeed indicator and when it reaches approximately 360 km/hr pull back the joystick until the elevator setting is just about the centre; the aircraft will then lift off. If you try to lift too rapidly, the aircraft may stall and crash. When you are clear of the ground, raise the undercarriage. Failure to do this will impair the performance of the aircraft."

Simple enough? Thankfully I could at least recognise what the Joystick was meant to do.

Once up in the air you've got to master climbing and descent, turning, avoiding stalling, navigation, approach and landing and even night flying. When you can fly like a pro you can test the Jumbo's capabilities with a little aerobatics.

It's a great game, even if you to tend to see more crash landings than gentle descent into airports. Most highly recommended.

CATCHING BOMBS

KABOOM, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

OK, so you want to be a do-gooder. Well, here's a video game that gives you the opportunity of matching your wits against a mad bomber. It's **Kaboom.**

As the Mad Bomber, still in prison stripes, throws his lethal explosives from the top of your television screen, your job is to catch them in a defusing bucket of water.

If you miss a bomb, all the bombs explode across the screen and you lose one of your three buckets. At this point the Mad Bomber expresses his enjoyment.

At this point, I must admit, I wondered if I wasn't just as mad playing along with his little game.

If you lose all three buckets, the game is over and, if you're keen enough, you'll check your score to see if you are improving.

A keen kaboomer aims, or catches, for a maximum of 999,999 points. That's a lot of bombs and playing time and probably well work the asking price.

COPS 'N ROBBERS

KEYSTONE KAPERS, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

Imagine a department store consisting of three floors and a roof, with departments interlinked with elevators and escalators. Imagine also that a thief is loose inside and only Keystone Kelly, your humble, unarmed police officer, is available to apprehend him.

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At last, an action, cops-and-robbers, video game without guns!

When the game begins, Kelly begins his hunt on the lower right-hand corner of the screen while Harry Hooligan is prowling around on the second floor looking for a quick way to the roof. If he reaches the roof he escapes and you begin the game again.

Kelly has the aid of a scanner (that appears at the bottom of the screen) to check where Harry is heading, but Harry is used to this sort of chase and makes the most unplanned for changes in direction.

Kelly must plan his way about the store and must judge whether to use the lift service or take the longer way around. As well, different parts of the store present extra difficulties. For instance, Kelly might have to dodge toy airplanes, or jump over old-fashioned radios left in his way.

It all goes to make the chase more interesting and fun.

And, while the game has the appearance of repetition, Harry's unpredicability gives each game a different angle.

For those who like an action-packed, non violent game **Keystone Kapers** offers, fast movement, changing patterns of play, and a very humorous theme.

MORE COPS

LOCK 'N CHASE, a Mattel game distributed by Mattel for the Intellivision video game system.

Owners of the Intellivision system have a number of maze-type video games available to them. The closest to what we can describe as the **Pac-Man** genre is **Lock 'n Chase** in which you control a bank robber through a maze picking up coins and other treasure.

Your bank robber is chased by three policemen who you can divert by locking gates behind you. So, for budding bank robbers, here is the game appraisal:

As with most Intellivision games, the graphics are top class. The game play is systematic and the gate locking gives you a variety of tactics.

However, the Intellivision hand control is not quite suited to the game. The action disc on the control makes it difficult to manoeuvre your bandit through the maze. A joystick would be far more useful in cornering.

SAVING CITIES

MISSILE COMMAND, an Atari game distributed by Futuretronics for the Atari 2600 video game system.

Missile Command is a popular video game about saving cities from nuclear annihilation. In the arcades, the game is enhanced by a rotating ball control which you can now obtain through **Wico** (distributed by Futuretronics) for your Atari system.

If you don't use the ball control you can still use your standard joystick controls but this limits the sensitive nature of the task. I'd hazard the guess that the unsuitability of the joysticks has probably caused the destruction of hundreds of thousands of extra video cities in livingrooms around the world.

In the game you defend six cities against intercontinental ballistic missiles (ICBMs) and "smart" bombs by your own bank of anti-ballistic missiles (ABMs). You gain points by keeping cities safe through each wave of attack and by being economical with your own missiles.

After the loss of your last city, the screen explodes with a dramatic **The End**. A suitable warning to President Reagan, Premier Andropov and us all.

Besides the apocalypse, **Missile Command** is a game of quick reflexes and concentration.

MS LIB

MS PAC-MAN, An Atari game distributed by Futuretronics for the Atari 2600 video game system.

While Atari's 2600-version of **Pac-Man** was a disappointment for most videogamers (so inferior to the Atari 400/800 computer version), the company has redeemed itself by its excellent adaptation of Midway's **Ms Pac-Man** arcade game.

Where **Pac-Man** suffered from dreadful graphics and much flickering, our **Ms** gets to move about clearly defined mazes (multiple this time) gobbling energy pills, dots, fruit, pretzels and ghosts.

In this game, thankfully, the exit tunnels appear to the left and right of the screen and the ghosts are recognisable. In fact you can choose between one to four ghosts haunting **Ms Pac-Man**.

For fans of the Pac family, this game is a dream. It is twice as good as the original and, because of that, it is at least twice as good fun.

PILL MUNCHER

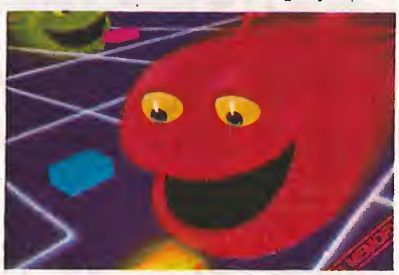
MUNCHKIN, a Philips game distributed by Philips for the Philips G7000 video game system.

As the name suggests, this is a game that bears a number of similarities with Atari's **Pac-Man** — although it does have interesting features of its own.

For a start, there are considerably fewer dots, only 12 on the screen at any one time, grouped together in the corners. One of the dots in each corner is a power pill which when "eaten," gives the blue munchkin a chance to eat at the "ghosts" that have been hounding it.

What makes the game challenging is the fact that the pills move around and you have to chase them to eat them. This simple twist makes all the usual **Pac-Man** style strategies obsolete.

This cartridge isn't enhanced by its graphics buts its originality does make it a worthwhile one to buy. As well, the G7000 packaging is excellent. The cartridges are supplied in a hard-plastic, durable cartridge case that allows for easy storage and holding of program details. The cartridge is also easier than other systems to handle, insert and remove from the player.



FIGHTING FURIES

NO ESCAPE, an Imagic game distributed by Imagic Australia for the Atari 2600 video game system.

This game reminds me of two popular games of an earlier vintage — **Breakout** and Imagic's own **Demon Attack. No Escape** seems to combine the game play of both games wrapped up in a theme of Jason (of the Argonauts fame) fighting the Furies.

Jason runs left to right along the bottom of the television screen beneath the canopy of an ancient temple. His only defence against the attacking Furies is to hurl stones at the temple roof dislodging "sacred" tiles. If a tile hits a Furie, it disappears. Likewise, if one of Jason's stones hits a Furie, the monster duplicates itself.

The Atari joystick controls Jason's running movement and the fire button releases the stone from his hand. Throwing angles are achieved by firing while Jason is moving about. Some control over the in-flight movement of the stone can also be achieved.

The game starts with six Furies moving across the screen similar to the start of **Space Invaders** and they are easy to eliminate. However, successive ways are faster and, as in **Demon Attack**, become wary of both Jason's position and the movement of stones and tiles.

Later waves also fire projectiles at Jason, so you have to watch out for their fire plus tiles that are falling to the ground. If you are hit by either, you lose one of your four "lives" but you gain extra lives at the end of each round.

As in **Breakout**, the tiles on the roof wear out and, if you are not careful, you can find yourself stranded without a section of the roof to dislodge on to the Furies.

Timing and accuracy are essential. Jason's lifeline (energy) slowly disappears and can cost you the game.

Points are awarded for destroying Furies, for using a few tiles as possible within the round and for making every shot count. Extra points are gained as the rounds get harder.

One or two players can play **No Escape** and two difficulty levels are provided. In the Basic version, Jason gains a life if he survives a wave. In Advanced, he gains a life only if he has survived the round without being hit.

An added feature of the game is what Imagic describes as "psycho sympathetic beat". This means that the throb of the Furies is linked to the basic heart beat. As the rate of the Furies increases, it can physiologically increase your feeling of tension.

If that is so, I doubt it would be wise to play the game if you have high blood pressure, heart problems or wear a pace-maker.

Of course, Imagic suggests that you have the sound turned up as loud as possible!

No Escape is an interesting game in that, although it doesn't break any new ground in graphics, sound effects (besides the "heart-beat") or game play, it does cleverly combine successful elements of other popular games.

LOW CRUISING

PLANET PATROL, a Spectravision game distributed by Videoactiv for the Atari 2600 video game system.

Planet Patrol is an involving fly-and-shoot space game in the **Defender** mould.

You command a space fighter over the planet Spectra encountering missiles, missile bases and space debris. Along the way you must rescue stranded pilots and refuel your fighter.

The action play is quite good and the variety of opponents keeps your interest up.

The graphics are also good and you get the added bonus of nightfall during the game which leaves you momentarily in total darkness — and still dodging the enemy.

UNDERWATER

POLARIS, a Tigervision game distributed by Videoactiv for the Atari 2600 video game system.

Here's a game that is highly recommended. A **River Raid** of the Silent Service, so to speak. One or two players can enjoy the fun and the 16 different variations.

Polaris begins with an air/sea battle where your submarine has to shoot down overhead bombers while avoiding their bombs and enemy submarines. You score points by shooting down the bombers (their value increases by altitude) or destroying the enemy subs (their value increases according to depth).

In this frame there's also an occasional enemy destroyer that sweeps overhead on the surface. If you hit that, you gain 800 points.

If you've been successful in clearing off the bombers, the enemy will then send in a dive bomber to drop "smart" torpedoes. The torpedoes drop to your position and your have to move fast to avoid them.

The dive bomber is also difficult to hit but, when you do, you receive 1000 points and the game progresses to the second screen.

In this screen, you have to navigate through underwater channels which change direction, narrow and widen continuously. As in **River Raid** you can get to memorise the course. First time round, you only have to steer safely to get back to the surface battle. But, if you succeed there again you'll find the channel route is now blocked by mines.

Shooting each mine is worth 300 points (you can also carefully — or dangerously — steer around them) but at each level of difficulty, currents and seas get rougher.

Polaris is certainly one of the better games around, combining at least two different game plays with a great variety of manoeuvring and concentration skills.

SNOOKERED

POOL, a Thorn-EMI game distributed by Thorn-EMI Video for the Atari 400/800 personal computers.

Thorn-EMI is excelling in its designs for games for the Atari 400 and 800 personal computers and **Pool** is no exception. There are three variations of the game on this program including American Tournament Pool and British 8 Ball Pool, both for two players.

The games are designed for players with a knowledge of Pool rules so the information brochure is full of game details.

On screen, you look down onto the Pool table. To the left is a barometre-style gauge that is used to indicate to you the force of your shot.

Your use a cursor on screen to position your cue, setting it at the point at which you want the cue ball to strike. If there is another ball in the way, your shot will not be successful but correct positioning will give you angles that you could probably never repeat on a real-life table.

American Tournament Rules requires you to "call" each shot before it's taken and you gain points by pocketing the "called" ball. British 8 Ball Rules (often called "Kelly's") requires each player to pocket the balls of one color followed by the black ball in winning shot.

A Practice variation is included as well. In this game you pocket 15 balls as quickly as possible.

This game comes as a cassette and an Atari cassette-loader unit is required.

UP THE CREEK

RIVER RAID, an Activision game distributed by Futuretronics for the Atari 2600 video game system.

This game may well by the true successor to **Space Invaders** as the most innovative and compulsive home video game of the time.

River Raid is a fighter bomber's tour of duty up the River of No Return. The Pilot — that's you — has to wind the plane through the river's twists and turns, countering anticraft fire from enemy jets, ships and helicopters.

Points are gained by destroying the enemy's defences, fuel installations and bridge across the river. You fail in your mission if you're hit by enemy fire, if you hit the banks of the river, crash into a bridge or run out of fuel.

You begin the game with a full fuel tank and you can replenish only if you swoop in on an enemy fuel depot (you learn how to pick up the fuel while destroying the depot at the same time). You also have three reserve jets which recommence play at the beginning of that section of the river where your last plane went down.

River Raid is a battle for points. 10,000 is a beginner's first target while the manual tells us that when the maximum of one million is achieved, all points on the screen turn into exclamation marks! At that point you probably get a free commission in the United States Air Force.

CHECKMATE

SARGON II CHESS, a Commodore game distributed by Computer Classics for the Commodore VIC-20 personal computer.

Chess has always been considered a strategic game played by people with above average intelligence — that is, by chess players themselves. Now, with personal computers such as the VIC-20, the playing skills of chess is within the grasp of the rest of us dumb animals.

Sargon II Chess is useful as a beginners game and, according to its manual, it "plays a superior game, and at a quicker speed than most computer chess games".

When you switch on your computer (after loading the cartridge) you are asked whether this is a game or a new "set-up" position. Type "G" and you are then asked whether you wish to play as white (starting first) or black. You then get the choice of seven levels of play.

The average time per move at each level ranges from an immediate response on level "0" to four hours on level "6". The actual time for a given move may range from about one-third to three times the average.

The screen is divided into three distinct parts. The chessboard appears to the left-third of the screen, the move window is directly to the right (and lists and last five moves in chess notation) and the bottom of the screen is reserved for messages such as the level of play, whose turn it is, check, mate, and the "ply" level.

When the computer is "thinking" about its next moving, the Commodore logo turns red, its suggested move may appear in the move window and it will also inform you about the number of moves it is currently looking ahead. This is called ply number.

When playing in levels 1–6, another useful feature of the game is to press the "?" key on the board and the computer will suggest what may be the best possible move available for most non-book moves. By taking its advice, you can often force it to a change of strategy.

The game can be played using either the keyboard by itself or the keyboard plus using the joystick for moving the chess pieces.

I found that using the joystick to move pieces was a help in adjusting to the vertical formal of the chessboard.

Once you get used to viewing the game in this way, you can settle back and enjoy the learning experience.

TALKING BACK

SPACE SPARTANS, a Mattel game distributed by Mattel for the Intellivision video game system. Intellivoice component required.

Space Spartans is another of the current crop of **Star Raider**-type games; in other words, games that have both a galactic chart and an on-screen cockpit view.

The object of the game is to hold off an onslaught of "Alien Fighters" and "Alien Starbases", whilst protecting your own Fighters and Starbases.

There are four voices, three of which give vital information on your survival in the game. One of the voices is female: this is your ship's computer, who informs you of your ships' functions and their status. Once you've positioned your Starbases, she opens up the proceedings with "Hello Commander, computer reporting ..." which does your ego a world of good.

There is a robot starbase computer which speaks only to inform you that the enemy has moved to the sector with your starbase in it. It might, for example, say "Starbase Two under Attack", and repeat this every five seconds or so, which can get very annoying, especially if you are trying to do something about it at the time. The other voice is a male voice which informs you of energy levels and numbers of aliens in your sector.

The fourth voice only speaks at the end when the enemy commander says "The battle is over", which seems a bit pointless really, as the "Game Over" message is already on the screen.

Both the graphics and sound were of the usual high Mattel quality, although not a lot of originality was shown in the actual programming. The voice aspect was used quite well.

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You stand in the fog-shrouded graveyard outside Ghost Manor. You must knock over tombstones to find the key, lantern, and tools it will take to rescue your friend who's trapped inside. But what else lies beneath those tombstones?

Inside, ghouls attack and a witch blows out your lantern as you search for the casket that magically transports you to the second floor. Once you find your friend, how do you get out before the house collapses? Ghosts have bad manors.

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SPIKE'S PEAK

You are Spike in a race against time: your body temperature drops as you climb. Can you traverse three treacherous game screens and claim the treasure at the summit before you freeze?

Hungry bears, diving eagles, plummeting streams, a sheer rock wall, and slippery glacial ice slow your progress. Are three lives enough to survive falling rocks, snow-slides, hidden crevasses, and the dreaded Abominable Snowman?

Reach the top and try level two!

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WEB OF INTRIGUE

SPIDERMAN, a Parker Brothers game distributed by Parker Brothers for the Atari 2600 video game system.

Generally speaking, video games based on popular movies of charactors have creative problems. The designer's task in those circumstances isn't to produce a new and original game but to fit a game to a concept.

Luckily, **Spiderman** is better than average in its field.

The theme of the game is to guide Spiderman up the side of a building using his web fluid to pull himself up. The web fluid is limited and you have to combine speed with accuracy.

When the web fluid runs out, Spiderman falls. Likewise, if you try to attach the web to a window (or open spaces between girders), Spiderman will plummet to the ground.

While scaling the building, you have to dodge criminals trying to cut the web and the web can be wasted by too much swinging out of reach or using it to arrest his fall.

When he has reached the top of the building, Spiderman has to defuse bombs planted by the Green Goblin in a high voltage tower. If Spiderman is too effective, the Goblin accelerates the pace by detonating a super bomb.

All in all, an interesting game for budding heroes.

HYPER WARP

STAR RAIDERS, an Atari game distributed by Futuretronics for the Atari 2600 video game system.

At last, the highly successful Atari 400 and 800 computer program that won the 1982 Video game of the Year Award from the American magazine **Video** is available for the 2600 format.

Those who have never seen or played the Atari computer version will have got the general drift from **Starmaster.** Atari has solved the problem of there being two few controls by including a "Video Touch Pad" with the game. There is a touch-sensitive keyboard controller that plugs into the back of the 2600; the idea is that the joystick connects to the left-hand socket and the touch pad to the right. The player then uses both controllers at once.

The **Star Raiders** controller comes with an overlay, which suggests that there may be more dual-control games available in the future.

With the touch pad you can switch from the galactic chart to the cockpit view as well as "hyperwarping", activating the shields and the battle computer. However, only five of 12 buttons are actually used, it would have been nice to see the long-range scan and aft view. The reason for the absence of these was probably to do with memory, as the Atari home computers have 16K compared with the 2600 which has only 4K.

Despite this, **Star Raiders** is an excellent cartridge, greatly enhanced by the additional controller, which makes it exceptional value.

BATTLE STAR

STAR STRIKE, a Mattel game distributed by Mattel for the Intellivision video game system.

Star Strike is set in a green trench which belongs to an immense, hostile space station (where have I heard that before?). You are being constantly attacked by alien "star-fighters," who loose off barrages of laser fire at your ships. However, once the fighters have passed overhead it's your turn to do a bit of blasting with your laser cannon.

While all this is going on, you will be passing over five red bomb hatches and it's your task to drop one of your bombs into each of these hatches. Only by bombing all five hatches will the station be destroyed, which is the object of the game.

At this time mother earth is coming within range of the station. When it does, or when your ship is destroyed, a bomb will be released and the earth will be blown into so many asteroids (for another game, perhaps!).

Not a great deal of imagination was used on this game; it is obviously a direct copy of part of the film, **Star Wars.** However, several nice touches have been added. For instance, when you are hit by laser fire your engine catches fire for a moment and one part of your defence is weakened — maybe your laser cannon will only work at half speed, or your early warning system breaks down. This adds a little realism, as does the fact that you get only one life. You lose this life if you collide with the floor or either wall of the trench, or if you are hit too frequently by the enemy.

SPACEGATE HERO

STAR VOYAGER, an Imagic game distributed by Imagic Australia for the Atari 2600 video game system.

This is a typical example of the shoot 'em down, cockpit-view, space pilot game theme.

In this one, your mission as commander of the giant cruiser, "Star Voyager", is twofold. Firstly, to destroy or dodge all the enemy fighters without running out of energy units' and, secondly, to pass through the seven stargates between you and your home planet.

Star Voyager is one of the few space games to give you a choice of weapons, either lasers of "photon torpedoes" which can be selected with the difficulty switch. There are two main game variations on this cartridge: the first has you in the cockpit versus computer-controlled adversaries and the second has one player in the cockpit and another controlling the enemy. Game one, however, can be played as a team effort with one player steering and another picking-off the aliens.

The programmer has got together an involved game while, at the same time, keeping it simple. The sound effects are quite good as too were the graphics — in particular the stargate effect.

SILENT SERVICE

SUBMARINE COMMANDER, a Thorn-EMI game distributed by Thorn-EMI Video for the Atari 400/800 personal computers.

Unlike Thorn-EMI's **Jumbo Jet Pilot**, this game is a breeze when it comes to understanding how to operate the myriad of controls and screens. After all, with a submarine, you are supposed to dive where possible.

Submarine Commander's theme puts you in command of a sub in the Mediterranean. Your mission is to attack and destroy enemy convoys scattered over the ocean. To help you are armed with a map, sonar, periscope and torpedo.

When you turn your game on, the computer asks you to choose a skill level (1–9) you also get the option of deleting the morse code sound at the beginning of the program.

You are then shown a map screen showing your position (white cross) and black dots representing enemy convoys. They're your targets and you score points for the tonnage of shipping you sink.

You gain more points for sinking tankers and cargo boats and less for destroyers and patrol boats. There are no extra points for picking up survivors.

Your computer's "S" key brings up the sonar screen which shows you a picture of the sea around you. The sonar also gives you a hydrophone chart (top left) which reacts to ships' engines and shows ships as peaks. You direct your submarine towards the ships by lining up a peak with the indicator in the middle of the chart.

Press "P" when you are at a depth of less than 50 feet and you will get a view of any ship within one mile range that is within your line of sight. You use this mode to prepare for attack.

When you are ready for the attack, and you are at a depth of around 25 feet, you press your trigger button while aiming your torpedo slightly ahead of the target ship.

To help with all of this, your joystick controls surfacing, diving and rudder control. Your Atari keyboard operates speed, ballast tanks, crash dive, buoyancy and (if need be) game pause or abort.

While all this may sound quite simple, the first real difficulty comes in mastering the instrument panel. As I mentioned before, it features the Hydrophone Chart and Sonar Screen. But there are many more instruments to monitor including the compass, torpedo supply, fuel supply, battery charge (this is **not** a nuclear sub), speed in knots, air supply, damage indicators, clock, depth below keel, depth guage and your tonnage sunk measure.

Skill levels determine just how many attacking enemy ships you encounter (destroyers and patrol boats) and how much air, fuel and torpedoes you carry. The higher the skill level, the more convoys you must attack to complete your mission, the worse damage will occur from enemy hits and the harder it will become to destroy the ships you hit.

Whatever the skill level, however, **Submarine Commander** requires planning and effective execution. You must balance the pros and cons of travelling above or below water for long distances (above water you run quicker and use less air but your more open to attacks from the enemy) and, when underwater, how much of your attack depends upon using your sonar. The enemy's listening devices will hear your sonar signals and give them your position.

The game ends when you've cleared the enemy, if all your air, fuel or batteries are exhausted or if you've suffered too great a damage to your craft.

Overall, the game gives you plenty of action and a multiple of chores and tactics to complete. It is time consuming but that in itself is a plus. Who, after all, expects to fight a war single-handed without a bit of pressure.

GOING DOWN

SUPERLANDER, a Commodore game distributed by Computer Classics for the Commodore VIC-20 personal computer.

Super Lander (also called on its packaging, **Jupitor Landing**) gives you the opportunity of landing a space capsule on a rugged plantary surface.

On screen you are presented with three potential landing sites of varying difficulties, fuel and speed indicators. The key to correct game play is to land your capsule exactly on the chosen site at the correct speed.

If you land too fast, your capsule disintegrates just as if you've hit a crater wall.

You only use the computer keyboard in **Super Lander**. The "A" key activates the capsule's left steering rocket to push you to the right and the "D" key moves you to the left.

The F-1 button provides maximum thrust (and uses more fuel), F-3 is for medium thrust and F-5 is for low thrust. Using maximum thrust will slow your descent dramatically but, if you are not careful, it will also shoot you off into space.

The game continues so long as you have fuel. You have to monitor your screen instruments to check your fuel reserves. At the end of the game, the screen also shows you your current score and the highest score during the operational series.

Super Lander is an involving game that gives you some of the feeling of being out there on an Apollo mission.

SLINKY STORY

TAPEWORM, a Spectravision game distributed by Videoactiv for the Atari 2600 video game system.

Slinky the worm is the star of **Tapeworm**. He likes to eat fruit and chases it across your TV screen. He also has enemies, notably Beeky the bird and Spanky the spider. Beeky and Spanky like to eat Slinky.

So, Slinky appears on the screen looking for fruit. You have to guide him in a series of vertical and horizontal lines as the poor worm can't travel diagonally.

Slinky must eat each of 10 beans as they appear one at a time in the time it takes for a beetle to wander across the bottom of the screen. If he eats the bean, the bean counter reduces by one and the beetle starts his walk all over again. If he doesn't, two extra beans appear on the screen and the bean counter is increased by a further two. After eating the beans in the counter, Slinky can catch a piece of fruit.

During all of this, however, Slinky has to avoid being eaten by Spanky and Beeky, avoid touching the edges of the bean patch and avoid getting himself tangled up. The last problem is really your problem, as each time Slinky gets longer, guiding him around the screen gets harder.

As the game progresses, more obstacles appear, you must play in "the dark" — night-time falls, even in a vegetable patch — and the point factor increases.

If you finish with over 8000 points, you can call yourself a tapeworm. If you're under 995 points then, bad luck, folks. You're fish bait!

FAST BALLS

TENNIS, a Mattel game distributed by Mattel for the Intellivision video game system.

This is an excellent Mattel sports game and, as with all Intellivision system cartridges, it comes with a plastic overlay that is inserted in the hand control.

The overlay provides you with the correct keys for serving — such as hard and soft swings and inner, centre and outer court positioning — and the direction disc moves your player.

The game follows the rules of tennis quite thoroughly. For instance, with serving, a player can, through bad play, be penalised for faults and lets.

Scoring is also accurate. To win a game, a player must win at least four points and be at least two points in front of the opponent. Sets are six games long and, again, to win you need to finish two games in front of your opponent. Win three sets our of five and you've won the match.

The game's visuals and sound are top class. Even the video screen's "audience" participates, watching the ball's movement across the court and even cheering good shots and lengthy rallies.

DISC JOCKEY

TRON-DEADLY DISCS, a Mattel game distributed by Mattel for the Intellivision video game system.

Once upon a time, video game manufacturers short of a new idea went out and bought the rights to a movie theme or character. Then Walt Disney, short of an idea for a movie, went out and produced a movie about video games. It was called **Tron**.

Then the worm turned the full circle, for Mattel, noticing some marvellous innovations in the movie, licensed a series of video games for its Intellivision system.

The first of the series to be released in Australia as **Tron Deadly Discs**. This game is based on the fight sequence in the movie where the hero Tron has to survive a battle against disc-throwing warriors.

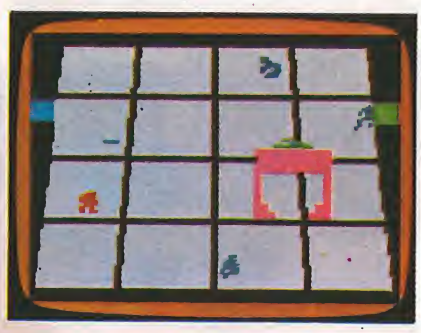
The object of the game is to score points by knocking out the computer-controlled attackers who attack Tron in waves of three against one.

According to the manual, 100,000 is a good score while one million is "entirely possible". I didn't get that far for this review but I did get the change of getting into the "swing" of the game.

The Intellivision hand control allows you to manoeurvre Tron around the screen with its directional disc. Overlays help you to throw Tron's disc in any of eight directions or to use the disc as a blocking shield.

Tron gets to fight four different types of warriors of differing abilities and point values. He also has to confront the Recogniser, a mechanical monster that comes into the game to repair any part of the battlefield that Tron's been able to damage.

Tron Deadly Discs makes full use of the Intellivision system's graphics and the game suits the hand controls. It will be of particular interest to **Tron** movie fans as well as serious videogamers.



DRIVING SKILL

TURBO, a Coleco game distributed by CBS Electronics for the ColecoVision video game system.

Here is a game that really gives you top-class graphics and the feeling of movement. Of course, you'll need to have purchased an Expansion Module 2 for your ColecoVision console to enjoy it, but it driving games turn you on, Turbo is outstanding.

The Expansion module includes not only a steering wheel but also an accelerator that goes to the floor and is operated by your foot. A hand controller from the main console itself is placed next to the steering wheel and its joystick becomes the gearshift lever.

The screen shows your car in the foreground above which are indicators showing the number of cars you have passed, your clock time and the number of spare cars you have left.

You drive down city streets, along country roads, over bridges, through tunnels and through all sorts of terrains and weather conditions. Oil slicks are a problem, so is ice. You have to avoid oncoming cars, ambulances, tricky corners and the sides of the road.

The action combined with amazing scenery make **Turbo** a gem of a video game.

There are only two minor considerations though. Firstly, the Expansion module requires batteries and, secondly, only one driving game is currently available for the module. It is quite an expense for one game.

ARCADE DELIGHT

VIDEO PINBALL, an Atari game distributed by Futuretronics for the Atari 2600 video game system.

Video Pinball aims to give you the sensations of real pinball on your color TV set. It works quite well.

When the game is on your screen, you get a bird's eye view of a pinball machine. The layout differs slightly between game levels. The novice level, for instance, gives you one drain hole plus the hole protected by your flippers, while level B has two extra drain holes.

As well, **Video Pinball** has two further formats — one basic and one that cuts out accumulating bumper values. Both can be played by one or two players.

OK, so how does it compare with pushing a ball around an arcade machine? Like the real thing, you gain points every time your ball hits targets, bumpers, roll-overs and spinners. The scoring is rapid and the game plays the appropriate pinball-type sounds when you score.

You can get the ball moving very fast around the screen, building up points and momentum. But what gives it that sense of pinball wizardry is that you can nudge the ball by careful use of the fire button on your hand control and even the plunger can set the ball off into the game at various speeds and angles.

And on top of all that, the dreaded tilt is as much a part of the action in this game as it is on the mechanical versions. Nudge the ball too much and the machine shows Tilt. Your controls go dead and the ball slowly, some might say mercilessly, slides to the bottom.

A handy game for those of us who learnt about amusement parlors before video games were around. Slightly ironic, eh?

INTRODUCING MOSQUITOES.

Write for a free catalogue

A sparkly new dimension in computer games from an all-Australian programme.

If Harrison Ford had you at the edge of your seat, when he was chased by boulders and poison darts; if the tense excitement of seeing him trapped in the ancient Egyptian ruins, in search of the lost ark, with all those serpents left you breathless; then this is going to be a real treat for you.
You're entombed beneath massive stone walls. Your only escape is through the locked door. You see the key, but there are swarms of deadly mosquitoes. You do have some insecticide so you may get courageous, but if they strike from above or below you are defenceless. Is there no escape? Yes! The ventilation tunnels. But where do they go? You won't find that out until you come out the other side.
So the heart-pounding race is on and if you have the nerve and skills of a true adventurer you may make it through the first door, only to find you're now in the dark. The key. You see the key, but finding your way through these secret chambers, evading the mozzies, and making it through the next door will leave you faced with the ultimate challenge.
This very original experience of electrifying graphics and startling sound will blow your mind, now, that the danger of the mosquitoes is compounded with the mystery of locating the key ... and we can't tell you where to find it because it doesn't play the same way twice, and you've never had as much fun with a VIC 20 until you take up the challenge of Mosquitoes!

AVAILABLE THROUGH YOUR COMPUTER DEALER

PARATROOPER

Realistic smooth action and true hi-res graphics. You are the only one left to stop them. The sky is full of enemy choppers. Paratroopers keep dropping into your area with a non-stop barrage of enemy troops. They are out to destroy you. This new game is an unbeatable blend of arcade action and quick thinking strategy. You must make every shot count — don't be too fast on the trigger. Every time you hit a chopper or paratrooper you get extra points. Wait until you see the climax of this game — you won't believe it! This is a multiple skill level game with razor-sharp graphics and sound. Joystick or keyboard runs in standard VIC 20.

ANNIHILATOR

Defend your moon base in this fast-pace, high-action game against attacking aliens who launch sophisticated heat-seeking missiles at you. Your Commodore 64 will amaze you with the complexity of sound and graphics in this programme. A similar programme is also available for VIC 20 and they'll provide hours of entertainment for everyone, or just about everyone because we all can't have a keen eye and a fast wit!

BUG-BLAST

The 'get-them' before they 'get-you' fun of Bug Blast is superb entertainment for the young and the computer novice. If you thought Centipede was fun, then shooting through the cactus with the hit-and-miss action of Bug Blast is going to inspire your imagination. Available for VIC 20, and Commodore 64.

ROAD TOAD C64/VIC 20
A new and unique version of Frogger, now a multi-action game for both computers. $19.95 VIC 20; $24.95 C64.

CHICKEN CHASE C64/VIC 20
Collect all the eggs from the chicken coop without being killed by the fox. $19.95.

UNDERWORLD OF KYN C64
Destroy the powers of the evil wizard of Kyn and escape from the twisted underworld. A challenging real-time graphics adventure for the C64. $24.95.

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IMAGOMAT 1016

AGAINST THE WALL

WALL DEFENDER, a Bomb game distributed by Z-Tronics for the Atari 2600 video game system.

Wall-Defender is a true defence game. Just like the castle defenders of old, your movement is restricted to a series of walls and its your task to prevent attacking forces from destroying the castle.

You begin the game with four walls and you use your joystick to move the defender along the outer wall. The fire button is used to shoot missiles at the attackers.

The outer wall can withstand ten attacks before it is destroyed unless a "super" attacker gets there first and bring the whole wall down without warning.

With ordinary attackers, you are given warnings of wall collapse by a deepening color in the wall itself and flashing at the seventh attach.

Before the oute[illegible] oes collapse, you must move your d[illegible] er to the next, inner wall by way [illegible] e linking the walls. If you don[illegible] in time the game is over.

You only get [illegible] n this game so the game finishes if [illegible] ender is caught at a wall collapse [illegible] all walls have been finally breach[illegible]

The attackers [illegible] in waves of "pages". The so called [illegible] differ with each page although the "super" alien can appear at any time.

If you get through a "page" without being hit by a single alien you can gain a bonus wall.

For a single theme game, Wall-Defender delivers what it promises. It makes for fast action and razed defe[illegible]e.

3D THRILLS

ZAXXON, a Coleco game distributed by CBS Electronics for the ColecoVision video game system.

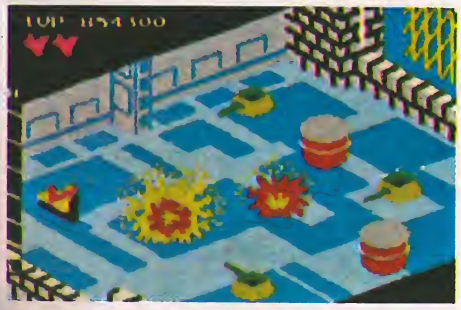
Imagine piloting a space fighter diagnolly across your video screen, flying low across an astroid avoiding cannon fire, walls and a force field then swooping off to do battle in deep space.

Imagine too that the enemy fortress is in startling colors, its defences and installations are clearly visible and the whole scenery has a 3-D effect.

Imagine all of that and you have **Zaxxon**.

From this brief description you'll understand that **Zaxxon** is probably the best fly and shoot video game that's been developed for a home video game system to date. It has all the elements of excitement and skill that you'd expect and the quality of the graphics and sound is outstanding.

Even the explosions are outstanding.



BOOM BOOM

Z-TACK, a Bomb game distributed by Z-Tronics for the Atari 2600 video game system.

Z-Tack is sort of **Atlantis** in reverse in that you have a series of bases on screen defending themselves and it's your job to command an attacking spacecraft. The enemy bases (they look like pretty cities — or even flowers — to me) are located in a series of caves or on top of hills and you have to be accurate to hit some of the deeper ones.

Your spaceship is a vibrant little thing. It changes colors and shape as you move it around. Your joystick can move it up and down and left to right. You can also fire your laser in those directions.

This is necessary because one trick the enemy uses is to float up gas balloons which can change, without warning, into fast-moving missiles. Obviously you have to shoot the balloons down when they are parallel to you ship.

The graphics of the game are bright and colorful and sound is quite OK. However, they are rather simplistic. A word of warning though, the simple theme of the game does not mean that you can lapse in concentration. The game does speed up as you proceed through the rotating six levels.

There are two difficulty levels (Beginner and Advanced) and the game can be played by one or two players.

NEW GAMES

Check our new issue

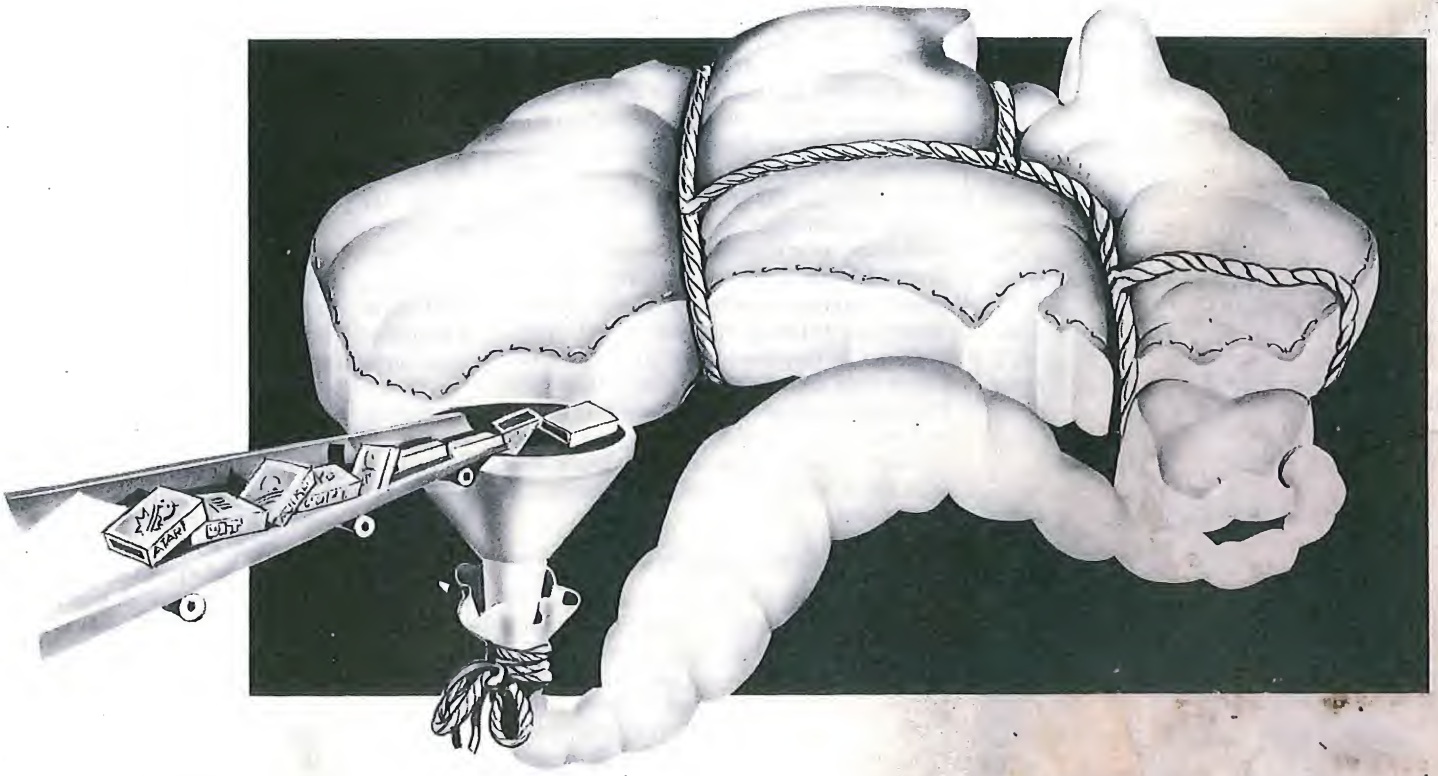
Great new games are constantly being released onto the Australian market and in the next edition of Score! we'll feature reviews of top games from home video and computer systems.

Among the reviews we'll include Activision's **Enduro** and **Robot Tank**, Atari's **Sorcerers Apprentice** and **Pole Position**, Parker's **Q-Bert**, K-Tel's double-header **Spike's Peak/ Ghost Manor** all for the Atari 2600 system.

For Intellivision fans, you'll see reviews on such Mattel games as **Burgertime** and **Dungeons and Dragons**, Imagic's **Ice Trek** and **Dracula** and Activision's **Happytrails**. We'll also look at ColecoVision titles such as **Smurf-Rescue in Gargamel's Castle** and **Mouse Trap.**

Home computer gamers can look forward to reviews of the best of the new titles being produced both in Australia and overseas for the major home computer systems. We'll also be featuring some of the programmers who are writing top games right here in Australia.

GAMES & COMPUTER SYSTEMS



"GROWTH in international markets continues to be strong, as does volume in all computer software. We are positioning ourselves for a virtual explosion in consumer software".

With these bullish remarks, **Imagic** president, **Mr William Grubb**, neatly summed up not only his company's view of the changing demands of the home games market, but that of the international games software industry as a whole.

Computer games are "in" for 1984 and beyond.

This is not to say that the regular video games systems (such as **Atari's 2600, Mattel's Intellivision** and **CBS' ColecoVision**) are kaput or even declining.

What is happening is that the home, or personal computer, has begun a dramatic growth curve to rival that of video games systems.

While video games systems continue to sell in still increasing numbers (Atari in the United States says sales of video games units there in April 1983 were up 10 per cent on the same month in the previous year) sales of personal computers are increasing at an even faster rate.

Figures produced in a study of the US video games industry by **Sandord C Berstein & Co** of New York show the comparative growth figures in graphic terms.

For instance, sales of video games cartridges in the US in 1983 were expected to reach 100 million units, with estimated sales in 1984 being 110 million, 120 million in 1985 and remaining the same in 1986.

Computer game software, on the other hand, was expected to sell a much lower figure during 1983 – some 17.5 million units. However, look at the growth being suggested for the following years: in 1984, 30 million, in 1985, 47.5 million and, in 1986, 67.5 million units.

For video games, that's an average annual growth rate for the years 1983 – 1985 of around 9 per cent, levelling off in 1986. For computer games – with a long way to catch up, mind you – the equivalent average annual growth rate is around 70 per cent with a further increase of around 70 per cent in 1986.

These developments are taking place in the United States where it is estimated that already more than 15 million homes (or around 18 per cent of homes) have video game units.

So what a[illegible]stralia?

Current est[illegible] hard to quantify, but one figure cu[illegible]ked about in the video games indu[illegible]er cent of homes, or about 200,000 v[illegible]nes units.

How this will [illegible]op is a debateable point. For [illegible] **Activision's** president, **Mr Jim Levy**, during his recent trip to Australia, suggested that Australia was one of the few countries where home video games were set to take off in the next few years.

He predicted that the penetration of video games units would more than double quickly and reach up to 30 per cent of homes by the end of the century.

"Because the penetration of video games into Australian households is still relatively limited compared with what it is in the US," he said at the time, "the Atari 2600, the Intellivision and the like are going to do extremely well during the next few years. We think the Australian market is turning [illegible] steep side of the growth market now."

The growth of the video games market is, however, disputed by some marketers of personal computers. **Mr Gerry Gerlach**, marketing consultant to **Computer Classics**, distributors of **Commodore Vic-20** and **64**

computers and software, says that the future has got to be in computers rather than simple games machines.

"Commodore is aiming at getting 80 per cent of the home computer market this year," he says, "and that may mean it will achieve 30 to 40 per cent of the games market."

Already some retailers are suggesting that there is a significant shift away from video games units to personal computers. A report in the Brisbane **Sunday Mail** by **Alan Fewster** quoted a spokesman for the **David Jones** department store as saying there had been a 90 per cent drop in sales of video games since December and an associated strong increase in sales of personal computers.

Mr Keith Moore of **Myer Stores**, who recently supervised the establishment of a computer sales centre at Myer, Indooroopilly, was also quoted as saying: "I don't think that the decline in video games has been as drastic as some people are saying but it certainly has been noticeable.

"What we are seeing now is the stage two in the home computer revolution. It began as a novelty game for the kids but inevitably things have become more sophisticated."

Atari distributor **Futuretronics** disputes that sales of Atari 2600 video games units and games cartridges are slipping and expects that the 2600 will still be market leader at the end of 1983.

The company sees the 2600s drop in price as giving it a further edge over other video games units and personal computers – plus the fact that the 2600 has an excellent range of games (including most of the major "hits") available for it.

Atari Challenge

But, either way, Atari can take advantage of growth in both directions having just released two new pers[illegible]omputers on the Australian market.

According to the [illegible]al Atari distributor, Futuretronics, Atari' [illegible]ustralian competitors "have had it too g[illegible] for too long. In the past, our home compu[illegible]r range has been priced too expensively."

Futuretronics believ[illegible]s its new range of Atari computers and sof[illegible]ware packages will win against any comp[illegible]rison and is brave enough to announce that it aims to sell around 10,000 of its **600XL** and **800XL** systems before the end of 1983 and 30,000 or more in 1984.

"All we can predict is th[illegible]uturetronics and Atari will be fighting fo[illegible]e lion's share of the Australian home computer market," they say.

More than anything else, however, the strength of Atari's software range for its computers will place it in a strong position.

[illegible]de games such as **Pacman, Missile Command, Galaxian** and **Defender** are among Atari's own software range for the 600/800XL computers. The game presentation is, of course, vastly different from that of the same game on the smaller 2600 video game unit.

As well, other game packagers are also starting to supply the Atari computers with leading games. Imagic, for instance, has released a version of **Demon Attack**, Activision has **River Raid** out and **Imagineering** has **Frogger, Jawbreaker** and **Squish 'Em** available.

Thorn-EMI – best known for its video movies – has released 19 computer cartridges and games, 17 of them are games for the 600/800, one is a home financial management program for the 600/800, one is a game for the Vic-20 and one is a music composer for the Vic-20.

Suddenly, the Atari 600/800 is entering a competitive software jungle of its own.

Thorn-EMI's range is interesting. It features **Jumbo Jet Pilot** – a flight simulator, complete with jumbo jet instruments and views through the cockpit windows; **Submarine Commander** – a three panel game with maps, instruments and periscope view; **Soccer Kickback** – an unusual football-type game; **Snooker & Billiards**; **Darts**; **Pool** – American tournament and 8 ball rules; **Cribbage & Dominoes**; four jigsaw puzzles; **Figure Fun**; **Super Cubes & Slip**; **Thorn EMI Compute 4 & Reversi**; **Owaro and Bull & Cow** and two educational puzzles for pre-school children called **Hickory Dickory Dock/Baa Baa Black Sheep** and **Humpty Dumpty & Jack & Jill.**

Commodore Leads

While Atari has been mounting its assault, market leader, Commodore, has not been idle either. It recently lowered the price on its Commodore 64 computer and accessories and it claims that its sales "are rivalling those of its 'little brother', the $299 Vic-20 home computer". The company also expects to sell 100,000 Vic-20s in Australia during 1983.

Commodore's own range of games, marketed by Computer Classics, includes **Gorf, Mole Attack, Raid on Fort Knox, Super Lander** and **Rat Race.**

Independent producers have, however, made the biggest contribution to the Commodore Vic-20 and 64 software ranges.

Sydney-based companies Imagineering and **Ozi-Soft** are both supplying top quality foreign and locally produced games for the two popular Commodore computers.

Imagineering believes that game software has increased from 10 per cent to 20 per cent of its business over the past year, mainly due to the growing popularity of the Vic-20.

The company represents a number of American software developers, including **Creative Software, UMI** and **HES.** The whole range of computer software titles available from these "publishers" is quite incredible.

These games include titles such as **Outworld, Superhangman, Cloudburst, Choplifter, Apple Panic, Trashman, Pinball** and **Concentration.**

More recently, Ozi-Soft has started developing its own software in its Sydney offices, and associated programmers have already come up with some excellent products. Prominent in the first locally-produced releases is **Mosquitoes** (written in machine code and basic and combining top graphics and sound), and educational programs such as **Music Tutorial, Speedy Reading 1** and **2** and **Typing Tutor 64.**

The company handles a large range of business application software for both the Vic-20 and the 64 including such titles as **Clublister, Savings Account Miser** and the **Barchart** (all Vic-20) and, for the 64, titles such as the disc-based filing system known as **Master File.**

"Just think, ZXYXIL, in a very short time we will have conquered Earth!"

Software Competition

The action does not, of course, just stop at the Atari 600/800XL and the Commodore Vic-20/64.

John Sand's Sega computer has its own range of computer games. So too do smaller selling personal computers such as the **Spectravideo SV-318**, the **Sinclair** computers, **Tandy** computers and **Dick Smith's Wizzard.**

Indeed, it was reported at the Chicago Consumer Electronics Show that there are now around 2,500 computer games companies offering more than 21,000 titles for the myriad of computers pouring onto the US market.

Not suprisingly, games developers are now adjusting their sales techniques to ensure that their best games are available for all of the leading computer and video games systems.

Above: Dick Smith's Wizzard
Left: Spectravideo's SV-318
Below: John Sand's Sega SC-3000.

Even Atari has established a new division called **Atarisoft** which provides leading Atari games for other formats. Already classics such as **Donkey Kong** and **Defender** are available through Atarisoft for the Commodore 64.

This mad scramble can best be understood by looking at the marketing strategies of the hardware manufacturers.

According to Jim Levy (in a recent interview with the New York **Video Games** magazine), hardware manufacturers are basically trying to develop a line at all points. They want to be down towards the lower end of the games business because there's real volume there, and that's going to be the mainstay.

"They want to have something priced in the $150 range – either a super game system that can turn into a computer, or a low-price computer. And then they're going to want to be positioned up at the high end with the more elite equipment."

So, we find the computer distributors supplying games-equipped personal computers for close to the same amount it can cost to buy a video games console and asking the public "Why buy the more limited product?"

In response, those companies with big investments in the video games market are not giving up their market penetration advantage without a fight.

The Intellivision video game system has, for instance, released a keyboard-add on that turns it into a personal computer. Spectravideo (distributed in Australia by **Videoactiv**) has also released its **Compumate** Basic Keyboard Enhancer that, once plugged into an Atari 2600 games unit, turns into a personal computer.

In early 1984, CBS will be releasing the **Adam** computer system that is based around the ColecoVision video games console.

The result? A bonanza for the consumer.

The most popular electronic games will become available for the leading computer and video games system regardless of who originated them.

Video game consoles will, in many cases, be able to be expanded into personal computers.

Personal computers, already dropping in price, already doubling in sales each year in Australia, will have access to an endless variety of games.

And we'll all be proving games designer **David Crane** right when he said that we seem to use our highest technology to amuse ourselves.

Isn't that fun?

WANTED

A video joystick that puts the firing button where it should be.

Compatible with
Atari 2600, VIC 20 and VIC 64

Triga command from IMAGIC puts the firing button under the trigger finger. No other joystick gives such a husky grip, not thin and spindly like most. A large base with removable suction caps clamps Triga Command to any smooth surface for total single handed operation.

Triga Command, the controller with the firing button in the right place.

From

IMAGIC

ATARI 2600
HOME VIDEO GAME SYSTEM

ATARI'S 2600 home video game system was one of the first game systems to accept interchangeable cartridges and it has proven to be one of the most popular electronic entertainment systems ever produced.

Because of the age of its design (it was first introduced in the United States in 1977), the 2600 is limited in graphics and game complexity when compared with later-generation systems. However, game designers are finding that, because of its excellent design, better programs are continually finding ways to exploit the system's capabilities.

This has lead to the 2600 becoming the "standard" system for home video game entertainment. In Australia, some ten companies are supplying games for the 2600 and the variety is endless.

The 2600 console has four main switches (On/Off, Color TV/Mono TV), Game Select, Game Reset) and a cartridge port on top, with slots for handcontrollers at the rear. A difficulty switch is located on both sides of the machine (for each hand controller) which effectively expands the skill and speed options for most games.

Two hand controllers are included with the system but other hand controllers are available for other games. Two sets of paired controllers allows for up to four-player action.

Because the 2600 is the highest selling home video games system in Australia, there are a number of distributors handling add-on accessories for it. These include flashy joysticks, remote control joysticks, tracking balls and slot-in computer keyboards that turn the 2600 into a mini-computer.

In the United States, companies are also producing accessories that boost the 2600's RAM (Random Access Memory) giving better graphics resolution and gameplay complexity.

The Atari 2600 is distributed in Australia by **Futuretronics Australia Pty Ltd.** A free **Space Invaders** cartridge is included with the purchase of the system.

MATTEL'S INTELLIVISION

Entertainment and Learning System

MATTEL'S Intellivision video game system is a sleek unit that was first introduced in the United States in 1979. The console, called the Master Component, features two switches, On/Off and Game Reset and two non-detachable handcontrollers. Unlike other video game systems, the hand controllers do not feature a joystick control.

Instead, the hand controllers have a 12-button keypad, two action buttons on each side and a 16-direction disc control. Each Intellivision-compatible cartridge includes plastic overlays which show what the key pad buttons represent in that game.

Games for the Intellivision are generally very good in graphics and game complexity. Indeed, Mattel's game designers were so thorough in exploiting the system's capability that there were complaints that the games were **too** complicated.

However, due to the system's popularity around the world, a number of independent game companies began producing a wider variety of programs to suit all skill and interest levels.

The Intellivision system has now been complemented by a series of peripherals that add learning abilities to the entertainment component.

Mattel was first to introduce a voice simulator for their home video game system. Known as Intellivoice, is plugs into the Master Component and adds a new sound dimension to game play.

So far four Intellivoice game cartridges have been produced and more are on the way.

The major add-on is called the Intellivision Entertainment Computer System. It simply plugs into the Master Component and can be immediately put into use as a computer.

The plug-in computer provides an additional 2K RAM and 12K ROM and three more sound channels to the Master Component. The adaptor also has BASIC built-in and is supplied with two program intruction books. The 49-key, QWERTY keyboard features spring-loaded (not simulated) keys. The computer keyboard, adaptor and transformer are available for around $159 rrp.

Also available for use with the Intellivision Entertainment Computer System is the new Music Synthesizer which allows users to learn music, play music and play musically oriented video games.

It's a full-size, 49 key music keyboard with the same look, feel and touch as an organ keyboard and plugs into the Computer Adaptor. It is available for around $119 rrp.

CBS COLECO VISION

The complete Adam computer including the Colecovision video game system.

COLECOVISION, the video games system released in Australia by **CBS Electronics**, has been described abroad as being the "third generation" format. First, they say, came **Atari's 2600**, then **Mattel's Intellivision** and finally, **ColecoVision.**

The ColecoVision is a smart looking unit with two plug-in hand controllers, a front slot for a number of peripherals, a top cartridge slot, On/Off and Reset switches and whopping 32 k bytes of memory (compare that to the **Commodore VIC-20's** 3 K!).

The extra memory allows the ColecoVision to provide graphics and sound that is second to none amongst video game systems.

In fact, the only drawback that can be found at all is that its controllers, a combination of joystick and 12 button touch pad, is not as precise as it could be. However, the controller leads have Atari compatible plugs which allows the use of Atari-configuration controllers for games where only a single fire-button is required.

The system comes with a **Donkey Kong** cartridge provided and a growing number of software suppliers are indicating that they will be providing games for it. But that's not where the fun stops.

Already the ColecoVision has two adapters available as add-on purchases.

The first adapter (**'Expansion Module'**) allows games designed for the Atari 2600 to be played through the ColecoVision. This can allow Atari 2600-owners to "update" to the ColecoVision without wasting all of their Atari cartridges.

The second adapter (**"Driving Expansion Module"**) is designed around the **Turbo** wheel, gear lever and accelerator to provide a real driving sensation. Coleco say that there will be more games available for use on the module.

Around March 1984, a further expansion system will be available for the system in Australia. It's called **Adam — The ColecoVision Family Computer System.**

The Adam computer components simply plug into the ColecoVision games console and turn it into a powerful 80 K home computer. As a complete set, the Adam includes a processor, keyboard and 120 words-per-minute printer.

The Adam's features therefore total up to 80 K RAM (with optional extensions to 144 K), typewriter-style, 89-key keyboard, 32 sprites (for graphics), three sound channels, Applesoft-compatible BASIC, 500 K mass memory, integrated word processor, letter quality printer and opional CP/M compatibility.

As well, it plays all the ColecoVision games and, through the extra module, plays all Atari 2600 games as well.

Even the standard ColecoVision hand controllers can be utilised for computer work — for example — for entering numbers quickly (calculator style) or as a fast omni-directional cursor screen position control).

CBS Electronics advises that the Adam package will be available as an add-on system for ColecoVision game system owners or as a complete computer/games package for first-up buyers.

ALL THE GAMES

PHILIPS G7000

The European designed G7000 home video game system has now been discontinued by its Australian distributor Philips. However, as a large number of game cartridges were made available for the system (and may be compatible with a new Philips computer system due for release during 1984) we have included them in our charts.

Most Philips cartridges: $29.95 Philips Super cartridges (*): $39.95 Philips Music cartridges (**): $49.95 Imagic cartridges (d): $49.95

CBS COLECO VISION

The CBS ColecoVision home video game system is sold with a free "Donkey Kong" cartridge. Expansion Module One permits the playing of Atari 2600 cartridges on the system. Expansion Module Two provides a steering wheel and accelerator/brake pedals for driving games (with a free "Turbo" cartridge).

ColecoVision cartridges: $59.98 Spectravideo cartridges (b): $49.95 Imagic cartridges (c): $49.95

SPORT	*3* American Football *6* 10 Pin Bowling/ Basketball* *8* Baseball *10* Golf *25* Slalom *27* Table Football *28* Volleyball *35* Billiards *36* Ice Hockey	
SKILL	*2* Pairs Logic* *12* Take the Money and Run *16* Marksman Depthcharge *17* Chinese Logic *19* Catch the Ball *21* Secret of the Pharoahs *23* One Armed Bandit *24* Flipper Game *26* Basket Game *29* Dambusters *32* Supermind *33* Jumping Acrobat* *38* Munchkin*	Donkey, Kong, Smurf-Rescue in Gargamel's castle, Mouse Trap, Lady Bug, Carnival, K-Razy, Pepper II, Donkey Kong Junior, Super Cross Horse (b), Frantic Freddie (b), Flipper Flipper (b), Spectron (b), Fathom (c).
SCI-FI	*11* Cosmic Conflict★ *18* Laser War★ *22* Space Monsters★ *34* Satellite Attack★ Demon Attack (d), Atlantis (d)	Zaxxon, Cosmic Adventure, Space Fury, Gorf, Space Panic, Victory.
ADVENTURE		Venture, The Wizard of Wor.
DRIVING	*1* Racetrack/Spinout*	Turbo.
COMBAT	*4* Air-Sea War* *14* Gunfighter* *20* Stone Sling *30* Battlefield	Looping.
LEARNING	*7* Mathematics and Memory Tests *9* Computer Programming *12* Play School Maths *31* Musician** *A* Message Maker	
BOARD AND CARD GAMES	*5* Blackjack *15* Samurai	Ken Uston Blackjack/Poker.

TO SCORE WITH

INTELLIVISION

Mattel's Intellivision home video game system has attracted a growing range of software suppliers. The system now offers an Intellivoice Module, Entertainment Computer System (ECS) peripherals and a Music Synthesiser Module. Game cartridges are:
(a) Intellivoice: $59.95 (b) Mattel: $19.95 (c) Mattel: $29.95 (d) Mattel: $39.95 (e) Mattel: $49.95 (f) Mattel: $59.95 (g) Mattel: $69.95 (h) Imagic: $49.95 (i) Activision: $55.95 (j) Parker: $49.95 (k) Mattel (ECS): $69.95

Hockey (c), Football (c), Bowling (d), Basketball (e), Horseracing (e), Golf (f), Soccer (f), Tennis (f), Skiing (f), Boxing (f), Baseball (f).	
Reversi (c), Snafu (3), Night Stalker (g), Look N Chase (g), Beauty and the Beast (h), Micro-surgeon (h), Frogger (j), Ice Trek (f), Tropical Trouble (f), Burgertime (f), Buzz Bombers (e), Shark Shark (g), Happy Trails (i), Q-Bert (j), Stampede (i), Scooby Doo (k), Mine Strike (k), Melody Blaster (k) Burgertime (g), Mission X (g),	
Space Battle (f), Astromash (f), Space Armada (f), Space Hawk (f), Star Strike (f), Space Spartans (a), Atlantis (h), Demon Attack (h), Empire Strikes Back (j), Maze-a-Tron (e), Solar Sailor (a).	
Utopia (f), Dungeons and Dragons (g), Tron Deadly Discs (f), Dragonfire (h), Swords and Serpents (h), Pitfall (i), Dracula (f), Bomb Squad (a), Adv. Dungeons and Dragons (g).	
Auto Racing (f).	
Armour Battle (f), Sea Battle (f), Triple Action (d), Sub Hunt (g), B17 Bomber (a), Mission X (f), Sharp Shot (g), Buzz Bombers (g).	
Maths Fun (b), Word Fun (b).	
Draughts (b), Roulette (c), Backgammon (d), Poker and Blackjack (d), Royal Dealer (f), Chess (f).	

ATARI 2600

Atari's (VCS) 2600 home video game system the strongest supported game format in Australia. The system is packaged with a free "Space Invaders" cartridge. Games are all cartridges as follows:
(a) Atari: $9.95 (b) Atari: $19.95 (c) Atari: $29.95 (d) Atari: $39.95 (e) Atari: $49.95 (f) Atari: $59.95 (g) Atari: $69.95 (h) Activision: $19.95 (i) Activision: $29.95 (j) Activision: $39.95 (k) Activision: $49.95 (l) Activision: $59.95 (m): Imagic: $39.95 (n) Imagic: $49.95 (o) Parker: $49.95 (p) Spectravision: $39.95 (q) Spectravision: $49.95 (r) Tigervision: $49.95 (s) Bomb: $39.95 (t) BIT: $39.95 (u) Telesys: $39.95 (v) Data Age: $39.95 (w) Xonox: $49.95

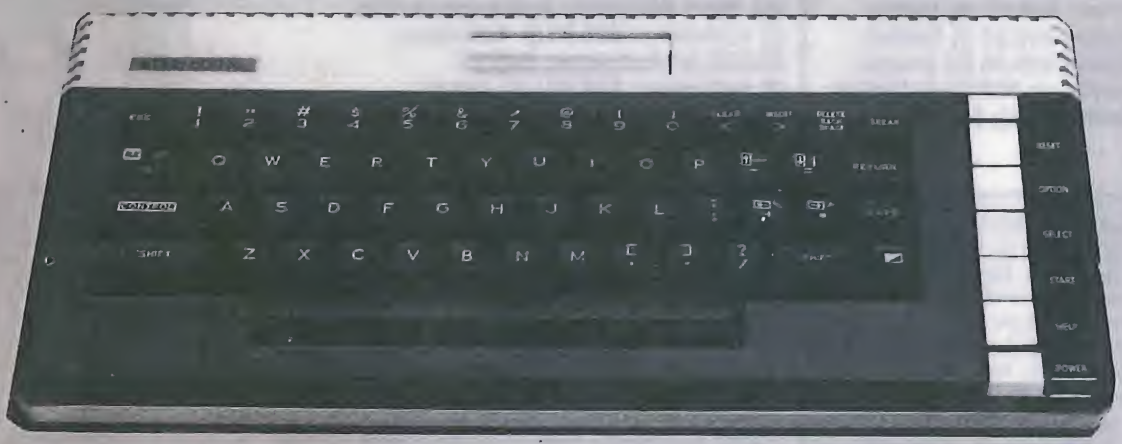
	Video Olympics (b), Bowling (a), Basketball (a), Boxing (h), Tennis (j), Real Sports Volleyball (c), Fishing (h), Skiing (i), Trickshot (k).
	Breakout (a), Surround (a), Circus Atari (c), Human Cannonball (a), Maze Craze (b), Pac-Man (f), Ms Pacman (f), Berzerk (f), Kaboom (j), Freeway (j), Stampede (j), Barnstorming (h), Demons to Diamonds (c) Super Breakout (d), Video Pinball (c), 3D Tic Tac Toe (a), Firefighter (n), Frogger (o), Amidar (o), Tapeworm (p), Gangster Alley (p), King Kong (r), Jawbreaker (r), River Patrol (r), Marauder (r), Reactor (o), Strawberry Shortcake (o), Sea Monster (t), Bobby is Going Home (t), Dancing Plate (t), Open Sesame (t), Fast Food (u), Master Builder (q), Ram it (u), Journey — Escape (v), Centipede (g) Donald Ducks Speed Boat (e), Sorcerer's Apprentice (e), Keystone Kapers (l), Oink (l), Spike's Peak/Ghost Manor (w), Action Man (o), Q-Bert (o).
	Space Invaders (f), Missile Command (e), Asteroids (f), Yar's Revenge (c), Defender (d), Laser Blast (h), Star Master (l), Swordquest-Earthworld (d), E.T. (g), Star Raiders (e), Atlantis (n), Cosmic Ark (n), Demon Attack (n), Star Voyager (n), Planet Patrol (p), Cross Force (q), Nexar (q), China Syndrome (p), Threshold (r), Empire Strikes Back (o), Megamania (l), Spider Fighter (l), Star Wars: Jedi Arena (o), Space Tunnel (r), MissIon 3000AD (t), Star Gunner (u), Cosmic Creeps (u), Frankenstein's Monster (v), Phoenix (f), Galaxian (f), Vanguard (f).
	Superman (b), Haunted House (c), Pitfall (l), Riddle of the Sphinx (n), Spiderman (o), Dragonfire (n), Raiders of the Lost Ark (d), No Escape (n), Jungle Hunt (f), Kangaroo (f), Miner 2049er (q), Tutankham (o), Dig Dug (g), Bumper Bash (q), Gashog (q),
	Indy 500 (e), Slot Racer (a), Night Driver (d), Dodge Em (b), Dragster (h), Grand Prix (k), Slot Machine (a), Demolition Herby (u), Enduro (l).
	Outlaw (a), Air Sea Battle (b), Chopper Command (l), River Raid (l), Great Escape (s), Assault (s), Z-Tack (s), Wall Defender (s), Phantom Tank (s), Bermuda Triangle (v), Sequest (l), Polaris (r), Battle Zone (f), Sky Jinx (h), Marauder (r), Joust (q), Robot Tank (l), Sky Skipper (o).
	Brain Games (a), Basic Programming (a), Concentration (a), Hangman (a), Math Grand Prix (c), Fun With Numbers (a), Alpha Beam with Ernie (e), Big Bird's Egg Catch (e), Cookie Monster Munch (e).
	Codebreaker (a), Casino (b), Backgammon (a), Bridge (k).

ATARI®
HOME COMPUTERS

WHEN computer writer Vic Kater reviewed Atari's earlier **400** series home computer, he described it as a system "ingeniously designed to be a high resolution games unit as well as a functional, user-programmable computer".

"One wonders," he wrote at the time, "at the engineering capabilities of computer manufacturers and their ability to mass

ATARI 600XL



ATARI 800XL

produce units of this type at such a low cost. However. seeing is believing and the Atari 400 is definitely an example of state of the art design.

"The unit is little larger than a shoe box but packed into its plastic case is 16K RAM topped with a full QWERTY style, monopanel keyboard."

Since then, Atari has retired the 400 (and its "big brother", the **800**) and has recently introduced into Australia a new series of home computers.

Known as the **600XL** and the **800XL**, the new series of Atari computers are packed with extra features and accessories. And both plug directly into your color television set for immediate use.

The 600XL is the introductory model — particularly suitable for users just beginning an association with computers.

The 600XL home computer features built-in Atari BASIC programming language. a full stroke keyboard, a HELP key and an international character set. It also features 16K RAM (Random Access Memory) expandable to 64K with an optional expansion Memory Module, and 24K ROM.

As with earlier Atari computers, the 600XL also offers 11 graphic modes, 256 colors (128 colors displayable at one time) and four independent sound voices through 3½ octaves.

In addition to all the features of the 600XL, the Atari 800XL home computer has three times the memory with 64K RAM built-in. This extra memory power allows the system to run more programs and store more information.

Accessories

Atari has upgraded its range of computer accessories with new storage peripherals and printers. Top of the range is the **1050 Disk Drive** which uses standard 13 cm floppy diskettes. With the Disk Drive, data access time averages around 74 thousandths of a second.

Initially released with the Atari Disk Operating System (DOS) II, which provided an 88K formatted storage capability, the Disk Drive is now complemented by DOS III which provides approximately 127 K memory in dual density format.

Previously introduced, the Atari **1010 Program Recorder** adds storage and retrieval capability to Atari computers without the expense of a Disk Drive. The 1010's four track, two channel format uses standard audio cassettes.

Printers

Two printers are now available for the Atari computer series, the **1020 color printer** and the **1027 letter quality printer.**

The 1020 printer/plotter is a compact four-color plotter for graphs, charts, diagrams and art. It delivers horizontal and vertical alphanumeric printing in English and international character sets at ten characters per second. Directly connected to any Atari home computer, it weighs less than two kilos and comes with a sample program cassette.

The 1027 letter quality printer can also be directly connected to any Atari computer without interface. It prints letter quality, fully formed characters suitable for word processing and other applications.

Designed to a trim 14.75 × 6.25 × 3 inches with a weight of only 2 kg, the 1027 prints 6.7 inch line lengths at 20 characters per second.

It features an automatic left and right margin of .66 inch built-in and both cut-sheet letterhead paper or continuous rolls can be accommodated. Print style is 12-point Prestige Elite.

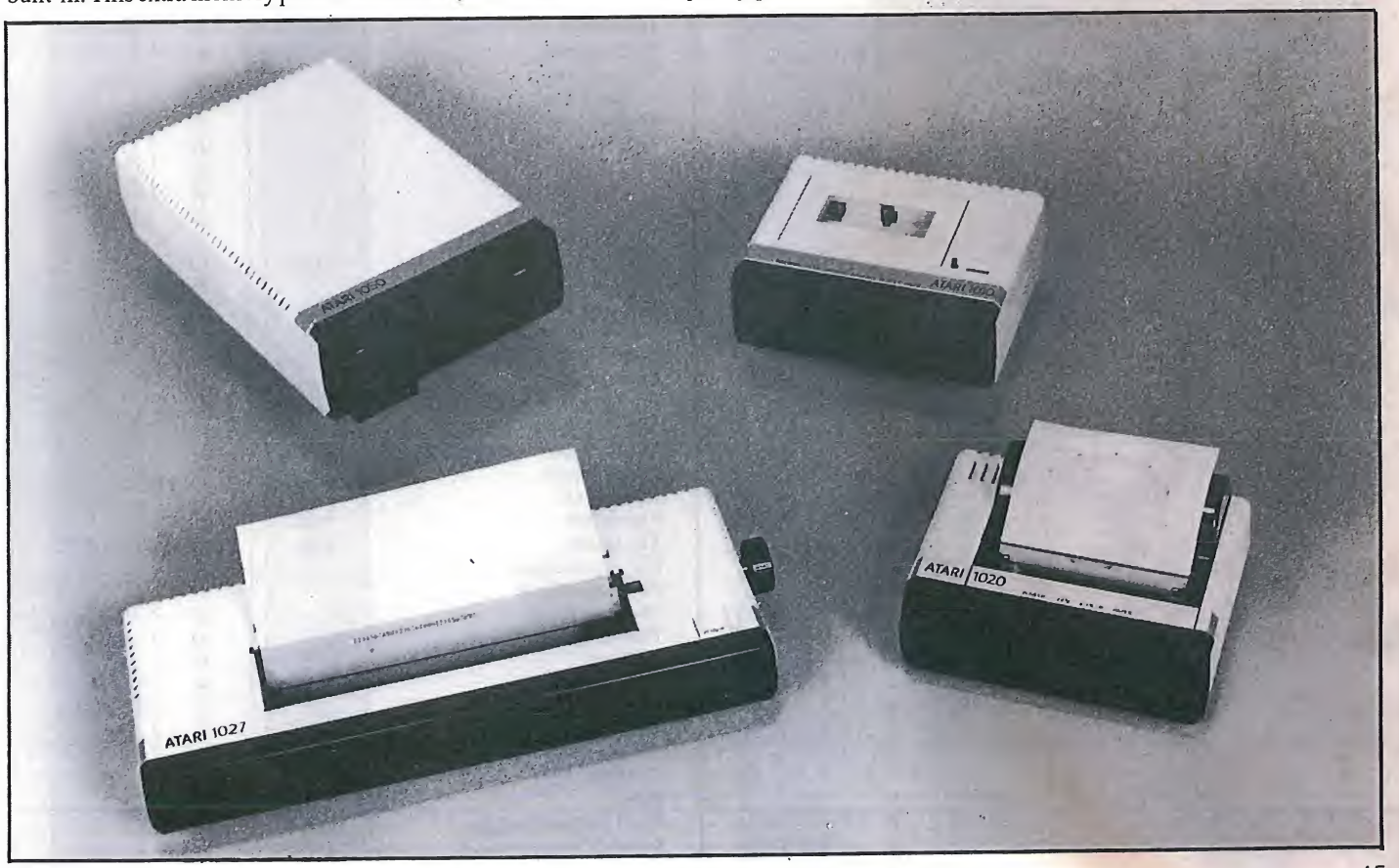
CP/M Module

A new external microprocessor upgrade that allows high powered CP/M software to be used with all Atari home computers is one of three expansion modules being released in Australia.

The **CP/M module** features a Z-80 microprocessor with 64K RAM and is fully compatible with the older **810** and the new **1050 Disk Drives**. The CP/M add-on offers 40 or 80-column video display output on a switchable basis.

Atari is also releasing an **Expansion Box** that allows control cards and special peripherals to be connected to the 600XL and 800XL home computers. It provides eight expansion slots, two RS-232 ports, one centronics port and a bi-directional parallel bus.

And, in order to expand the 16K memory of the low cost 600XL computer, Atari has released a **64K Memory Module** that plugs directly into the expansion port at the rear of that computer.



ATARI COMPUTER SOFTWARE LISTINGS

In order to fit as many programs as possible into our pages, we have had to use codes for some columns, considerably shortening the wording.

The information given for each program is: Title; Memory required to run it (if not standard); Format Type; and Australian Distributor.

The codes we have used are:

Format Type:

R = Cartridge
C = Cassette (tape)
D = Disk
Basic = BASIC cartridge required

Distributor: (1) Imagineering; (2) Jedko Games; (3) Thorn-EMI; (4) Imagic; (5) Futuretronics; (6) Ozi-Soft; (7) Computer Classics; (8) High Technology; (9) The VIC Centre; (10) Peter Newman; (11) Pittwater; (12) Progressive Software Publishers; (14) Melbourne House.

Name of Game	Memory Size	Format Type	Distributor Code
3D Tic Tac Toe		R	5
Action Quest	16K	C	1
Adventure On A Boat	32K	D	1
Ali Baba & 40 Thieves		D	1
Alien Egg		D	5
Alien Hell		R	1
Alien Swarm	16K	C	1
Andromeda	24K	D	1
Andromeda Conquest	32K	C	2
Andromeda Conquest	40K	D	2
Apple Panic		C	1
Attank		D	5
Attank		C	5
Avalanche		D	5
Avalanche		C	5
B-1 Nuclear Bomber	16K	C	2
B-1 Nuclear Bomber	24K	D	2
Babel		D	5
Babel		C	5
Bandits		D	1
Basketball		R	5
Battle For Normandy	32K	C	2
Battle For Normandy	40K	D	2
Battle Of Shiloh		C	1
Battle Of Shiloh	32K	C	2
Battle Of Shiloh	40K	D	2
Bishops Square		D	5
Black Jack		C	5
Blade Of Blackpoole		R	1
Block Em		D	5
Block Em		C	5
Bomber Attack	16K	C	2
Breakthru		C	2
Breakthru		D	2
British Jigsaw Puzzles I		C	3
British Jigsaw Puzzles II		C	3
Bug Attack	16K	C	1
Canyon Climber		D	5
Canyon Climber		C	5
Castle		D	5
Caverns Of Mars		D	5
Centipede		R	5
Centurion		D	5
Centurion		C	5
Chameleon		R	1
Chicken		C	1
Chicken		D	1
Chicken		D	5
Chicken		C	5
Chinese Puzzle		D	5
Close Assault	40K	C	2
Close Assault	48K	D	2
Clowns And Balloons		C	5
Code Cracker		D	5
Code Cracker		C	5
Comedy Diskette		D	5
Compute 4 & Reversi		C	3
Computer Acquire	16K	C	2
Computer Chess		R	5
Computer Facts In Five		C	2
Computer Facts In Five	48K	D	2
Conflict 2500	32K	C	2
Conflict 2500	40K	D	2
Controller	16K	C	2
Controller	40K	D	2
Cosmic Balance	48K	D	2
Cribbage & Dominoes		C	3
Crossfire	32K	D	1
Crossfire	16K	C	1
Crush, Crumble & Chomp	32K	C	1
Crush, Crumble & Chomp	32K	C	2
Crypts Of Terror	16K	C	1
Crypts Of Terror		D	1
Cytron Masters	32K	C	2
Cytron Masters	48K	D	2
Darts		C	3
Datestones Of Ryn	32K	C	1
Davids Midnight Magic		C	1
Deadline		C	1
Defender		R	5
Delux Invaders		R	1
Demon Attack		R	4
Dnieper River Line	48K	C	2
Dnieper River Line	48K	D	2
Doc Goodcode's Cavern	48K	D	1
Dodge Racer		C	1
Dodge Racer		D	1
Dodge Racer		D	5
Dodge Racer		C	5
Dog Daze		D	5
Dog Daze		C	5
Donkey Kong		R	5
Down Hill		D	5
Down Hill		C	5
Draw Poker	16K	C	2
Eastern Front		D	5
Eastern Front		C	5
Empire Of The Overmind	40K	C	2
Empire Of The Overmind	40K	D	2
Energy Czar	Basic	C	5
Europe Countries/Capitals	Basic	C	5
Europe Jigsaw Puzzles I		C	3
Europe Jigsaw Puzzles II		C	3
Fastgammon	8K	C	1
Figure Fun		C	3
Flying Ace	16K	C	2
Flying Ace	32K	D	2
Fort Apocalypse		D	5
Fort Apocalypse		C	5
Fredericksburg		C	2
Fredericksburg		D	2
Frogger		C	1
Galaxian	Basic	R	5
Galaxy	16K	C	2
Galaxy	24K	D	2
Genetic Drift		C	1
Gomoku		D	1
Gorf		C	1
Guns Of Fort Defiance	32K	C	2
Guns Of Fort Defiance	48K	D	2

Name of Game	Memory Size	Format Type	Distributor Code
Gypsy	16K	C	2
Gypsy	32K	D	2
Hangman	Basic	C	5
Hickory Dickory/Baa Baa		C	3
Humpty Dumpty/Jack & Jill		C	3
Intruder	16K	C	1
Invasion Orion	32K	C	1
Jawbreaker	16K	C	1
Jawbreaker	16K	D	1
Joust		R	5
Jumbo Jet Pilot		R	3
Kaboom		R	5
Kayos	8K	C	1
Kickback		R	3
Kingdom		C	5
Knights Of The Desert	32K	C	2
Knights Of The Desert	40K	D	2
Knockout	16K	C	2
Labyrinth		C	1
Legionnaire	16K	C	2
Look A Head		D	5
Look A Head		C	5
Lords Of Karma	40K	C	2
Lords Of Karma	48K	D	2
Mar Tesoro	24K	C	1
Match Racers	16K	D	1
Match Racers		C	1
Maze Of Death	24K	C	1
Megalegs	16K	C	1
Memory Match		D	5
Memory Match		C	5
Midway Campaign	32K	C	2
Midway Campaign	40K	D	2
Mind Bogglers 1	16K	C	1
Minotaur		D	5
Minotaur		C	5
Missile Command		R	5
Mission Asteroid	40K	D	1
Monster Craze		C	1
Moon Patrol	16K	C	2
Morloc's Tower		C	1
Mouseattack	32K	D	1
Mr Jong		R	1
Mr TNT		R	1
Ms Pacman		R	5
Music Composer		R	5
Name That Song	16K	C	1
Nautilus	32K	C	1
Nautilus	32K	D	1
Nautilus		D	5
Nautilus		C	5
North Atlantic Convoy	16K	C	2
North Atlantic Convoy	24K	D	2
Nukewar	16K	C	2
Nukewar	24K	D	2
Outlaw/Howitzer		D	5
Outlaw/Howitzer		C	5
Owari/Bull & Cow		C	3
Pacific Coast Highway		D	5
Pacific Coast Highway		C	5
Pacman		R	5
Paris In Danger	48K	D	2
Pathfinder		C	1
Planet Miners	24K	C	2
Planet Miners	32K	D	2
Poker Solitaire	8K	C	1
Pool	32K	D	1
Pool		C	3
Protector	32K	D	1
Protector	32K	C	1
Protector 2		D	5
QIX		R	5
Rally X		R	1
Raster Blaster	32K	D	1
Rescue at Rigel	32K	D	1

Name of Game	Memory Size	Format Type	Distributor Code
Reversi	8K	C	1
Reversi		D	1
Richochet	16K	C	1
River Raid		R	5
Road Racer Bowler	16K	C	2
SCRAM		C	5
Shamus		D	5
Shamus		C	5
Shootout At OK Galaxy	16K	C	2
Shootout At Ok Galaxy	32K	D	2
Sky Rescue		C	1
Sleazy Adventure		D	5
Slime		C	1
Slime		D	1
Slime		D	5
Slime		C	5
Snake Byte		D	1
Snooker & Billiards		C	3
Soccer		R	3
Softporn Adventure		D	1
Space Chase		D	5
Space Chase		C	5
Space Eggs		C	1
Space Invaders		R	5
Space Station Zulu	32K	C	2
Space Station Zulu	48K	D	2
Space Trek		D	5
Space Trek		C	5
Squish 'Em		R	1
Star Blazer		D	1
Star Fleet Battles	32K	C	2
Star Raiders		R	5
Star Warrior	32K	C	1
Star Warrior	32K	D	2
Starbase Hyperion	24K	C	1
Stellar Shuttle		C	1
Submarine Commander		R	3
Sultan's Palace		D	5
Super Breakout		R	5
Super Cubes & Slip		C	3
Survival Adventure	32K	C	1
Tact Trek		D	5
Tact Trek		C	5
Tank Arcade	16K	C	2
Tanktics	24K	C	2
Tanktics	32K	D	2
Temple of Apshai	32K	C	1
Terry		D	5
Terry		C	5
The Alien		C	2
The Alien		D	2
The Pit		R	1
The Shattered Alliance	40K	D	2
Threshold	40K	D	1
Tigers In The Snow		C	1
Tigers In The Snow	40K	C	2
Tigers In The Snow	40K	D	2
Track Attack		D	1
Tumble Bugs		D	5
Type Attack		D	1
Ultima II		D	1
Ulysses Fleece	40K		1
Upper Reach of Apshai		C	1
VC	40K	D	2
Vorrak		C	2
Vorrak	48K	D	2
Voyager	24K	C	2
Voyager	32K	D	2
Wayout		D	1
Wizard And The Princess	40K	D	1
Wizard Of Wor		C	1
Wizard's Gold		D	5
Wizard's Revenge		D	5
Zork I		D	1
Zork II		D	1

commodore VIC-20 COMPUTER

Reviewed by Vic Kater

IT WAS with an instinctive urge that I was drawn towards reviewing a computer that had a human name designated to it by the manufacturer. Not any human name, as this would not have sufficiently aroused my interest, but my own name that was proudly designated to me by my own manufacturer.

I'm referring to the VIC-20 computer that Commodore released on the hungry home computer market. This small box of plastic and micro-circuitry has been placed with little trepidation into my educational computer category as it not only performs tasks that may be programmed by us lesser humans but also possesses a lighter nature of color and excitement.

The small, cream and black unit rests quietly on the laminex bench with its typewriter-style keyboard glistening in the harsh fluorescent light, waiting eagerly for the command that will send it off to perform a multitude of tasks in an instant.

This little unit can be quite misleading in appearance. Seeming like an overgrown calculator, it supports all the peripherals that his big brothers so proudly boast.

The heart of the unit, powered inconspicuously by a 240V pack, contains the CPU, on-board RAM and ROM memory chips, the various interfaces, a tone generator and the keyboard assembly.

The typewriter keys cleverly display their functions with clear alph-numeric and graphic characters embossed into the plastic caps. To the right of the keyboard are four special function keys that may be programmed to perform certain tasks.

Additional equipment on this display model included a color monitor, disk drive, cassette player, printer and expansion board with assorted software cartridges plugged into appropriate slots.

I soon found the computer to be quite easy to use, allowing the BASIC programming language to directly control the eight primary colors, produce a mixture of colors and screen formatting and create extra graphic characters, as well as all normal functions such as loading and saving programs, operating the printer and disc drive etc.

Added features were the three inbuilt tone generators and sound generator providing programmed control of three-part harmonies with percussive backing.

The Keyboard

The keys are well laid out in the usual QWERTY typewriter arrangement with the additional control keys evenly spaced to either side. The cap size is slightly small due to the compact design, but providing you have fingers and not flippers no problem should be encountered in hitting the right keys.

The unit may become cluttered once all the peripheral devices are attached. A book-sized expansion board plugs directly into the rear of the unit as do all the other cables and RS232 serial interface adaptor. This requires some careful arrangement on the desk top to prevent accidental disconnection.

The Language

The computer is provided with built-in **Micro-soft PET BASIC**, that is, a powerful and easy to learn programming language. Commands are entered line by line and are executed in the order thay are typed. An editor is also provided, quite an achievement for a computer this size, that allows for quick and easy correction or changes to programmed lines.

All computer functions are supported through BASIC, however, for serious or masochistic users Commodore has provided for 6502 assembly language programming and even has application software to help with this task.

Monitor Screen

The color monitor provides the most impressive display as a black and white monitor would obviously render the colour capabilities redundant. The character display seemed unusually large, appropriate for young and first time users, but cumbersome and distracting when serious programming is attempted.

The color reproduction is good, providing a seemingly endless combination of 16 foreground and background colors; excellent for games and retaining the interest of young users. The upper and lower case characters tend to become illegible when certain color combinations are used.

The TV at home can be used as a monitor, however, a modulator, available with the unit, is needed to provide the correct frequency for the aerial input.

Expansion Board

Any serious user will need the additional mother board which allows the expansion of memory capabilities up to 32K, as well as providing aids and pre-written programs which are stored permanently rather than on cassette tape, allowing instant execution of the required task.

The programs come in cartridge form containing memory chips, and plug into one of the six available slots in the expansion board. Programs available are in three categories:

(a) Memory expansion — These are not really programs but are still in the cartridge form. They come in three sizes, 3K, 8K and 16K and can expand the memory to a total of 32K.

(b) Applications software — These cartridges expand the functions of the computer to provide easier programming and execution of certain tasks. The **Super Expander** not only provides 3K of extra memory but also allows high resolution graphics, color, paint and sound commands for multi-color and music programs while the **Programming Aid** gives the user 20 new BASIC commands as well as allowing re-defined functions on certain keys to provide new user commands and sub-routines.

A machine language monitor is available for assembly language programming and includes a line assembler and disassembler.

(c) Games software — A wide range of recreational and personal software is available on cartridge and cassette. However, most are on cassette due to the higher cost of cartridge manufacture.

Cassette Player

A special cassette player is made by Commodore, called **Datasette**, which I suspect is a fancy name for a domestic mono cassette player. However, don't be fooled into conscripting young Mary's cassette player to computer work as some players will not function correctly in this type of environment. A good talk to your dealer will reveal the facts.

Printer

The printer available is a small dot-matrix one with the ability to print graphic characters. A bold type font is also possible as well as upper and lower case characters.

The printer has an added extra in that it has its own memory for standard graphic characters — a big bonus in such a small package. The user is not restricted to using this printer as the optional RS232 interface allows the connection of many other standard peripherals.

A floppy disk drive has been manufactured for the VIC-20. Using standard 5" diskettes it can store up to 170K on each disk allowing fast access to mass storage.

The operating system for the disk drive is similar to many other commercial systems providing the user with a good background knowledge of disk operations. This item would be a later addition for most users as its cost is fairly prohibitive at first. Its capabilities are most appreciated after one has struggled through a few months of using cassettle storage.

Controls

Joysticks are available for controlling the movement of characters in graphic games etc. This adds immensely to the realism of a game and develops co-ordination for young children. Also available are paddles for playing certain ball games and directing projectiles in war games.

Information

The unit comes with an excellent user manual that presumes no prior knowledge of computer operations. The instructions are easy to follow and are well formatted with graphic representation of operations as they are performed.

The BASIC language is used extensively in the manual and all commands are described in detail to reveal their full potential. Other manuals available include introductory books to computing and BASIC programming.

A reference guide provides extensive information on VIC BASIC programming. A technical book has been released for the serious user and delves into the intricacies of the computer.

Overall, the little computer appears a real gem and definitely is a forerunner in the home computer market.

COMMODORE 64

HOME COMPUTER

Reviewed by Mark Lingare

Musical add-ons to the Commodore 64 fascinated dealers at the American Consumer Electronico Show.

Commodore 64 Home Computer

THE Commodore 64, how good is it? Does it live up to expectations? I have had one since Christmas and have now spent several hundred hours on it.

When it arrived it was wrapped in a cardboard sheet, similar to that of the VIC, and when I opened it, it looked exactly the same as the VIC, only a different color.

"How could the 64 be the same size as the VIC but be so much more powerful?" was the question that flipped through my mind.

So with screwdriver in hand we decided to see what makes this machine tick. When we opened it, to our astonishment, what stared back at us was not millions of transistors nor a hundred chips, but about 20 chips. This was unbelievable.

Maybe they accidentally left some out? But they were all there. So we decided to see what vividly imaginative title would appear on the TV screen after we turned it on.

The manual quite explicity said "plugs into any television" so we connected it to the TV, turned it on, and after a short delay the message flicked to the screen.

Yuck! It wasn't the message that was bad, it was the screen. The RF modulator was not good as the blurred picture indicated. Why couldn't it be like the Atari screen, crystal clear?

So we switched the 64 to our Profeel monitor. Ah! That's better. The message ran "COMMODORE 64, 64k ram system ... 39811 bytes free for BASIC".

But what is this 39811 bytes free for BASIC? Where is all this 64k that everyone is raving about? Where is the extra 24k?

The manual solved the mystery. The operating system and the on-screen editor, the most advanced created to date, and other such devices occupy the missing 24k.

Mozart of the Micros

Possibly the best feature of the 64 is the sound capabilities. The Sound Interface Device (SID) chip is at the heart of this "Mozart of the micros".

For those who just want to play notes the SID has nine octaves. In comparison a piano has eight. And for those who wish to manipulate the sounds the SID has three voices.

Each voice has ADSR. For those of us without portable organs that means Attack, Decay, Sustain and Release.

Attack is the time taken when going from zero amplitude to peak amplitude.

Decay is the time taken when falling from the peak to the intermediate level.

Sustain is the length of time the intermediate level is held for. And release is the time it takes to fall to zero amplitude.

By manipulating these registers one can change the sound of the note. Make the note hollow or echo. Changing the note can make it sound like it is a trumpet or a piano.

The Commodore 64 manual tells you how to create 10 such instruments ranging from oboe to harpsichord. Personally I have also created a harmonica and a harp. Another brilliant feature is that the SID has three voices.

Each voice can be individually programmed. They can be programmed either as three individual instruments, thereby creating an orchestral effect when played in unison, or if all voices are programmed as the same instrument but playing different notes, a chord effect is produced.

Each voice also has a filter for cut-off points of high and low frequencies. These filters can be used to manipulate top end, bass, mid range and for a number of special applications.

Yet another brilliant feature unique to the 64 is its ability to process sound through an Audio In channel.

With this you can channel sound from a hi-fi system through the 64 and out again. While it is in the computer you can change the frequency, volume and wave length.

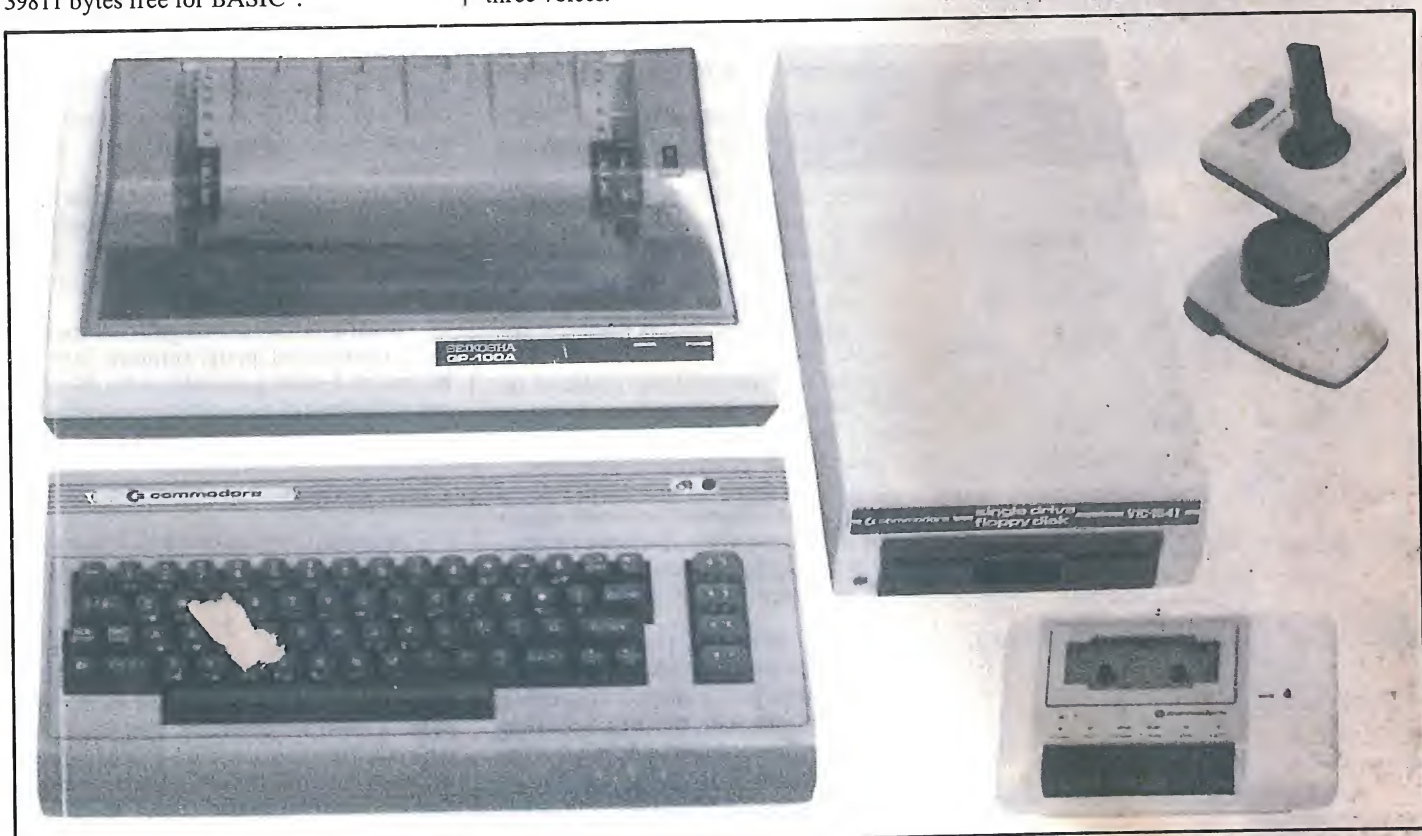
So you can take a singer or a sound effect and drop it an octave or give it a square wave form thereby giving the tone a computerised sound. Great for special effects for film making.

You can make anyone sound like a robot or an alien from outer space. This can then be recorded on the sound track of video home movie.

Advanced Graphics

The other main feature of the 64 is its advanced graphics capabilities. Like other Commodores, graphic characters are available from the keyboard. They include the usual sticks and circles and like the VIC you can program your own set.

This graphics from the keyboard is one of the main features that has made Commodore so popular. Apple doesn't have.



graphics on the keyboard and Atari only a limited number.

The Commodore 64 programmable character set is useful when creating games, such as designing spaceships and other oddities which you can then save to use later.

You can also use this programmable character set for writing and learning foreign languages. For example you can put accents over French and German words, something you can't do with most word processing programs.

The 64 has a larger number of colors than its baby brother, the VIC (Commodore expects 20 per cent of 64 buyers to be VIC owners trading up).

On the VIC a character can be any of eight colors, while on the 64, 16 colors are accessible from the keyboard. The new inclusions are orange, three shades of grey, a much wanted skin tone (light red) for human characteristics, a much needed brown, light blue and light green.

The most powerful facility on the 64 is the sprite.

Moveable Object Blocks (MOBs or SPRITES to us) are the most powerful graphics tools created by computer.

Called shape tables on the Apple and player missiles on Atari, sprites are sections of the computer's memory in any graphic design wanted by the programmer.

The sprite originated from the arcade games. The laser cannon you fire or the asteroid that just pulverised you in your favorite coin-op is a sprite. But on the 64 the power of the sprite has been increased.

In the 64 the sprites can pass over each other, behind scenery, detect whether they are on top of another sprite or behind one. The sprite can be expanded on its X and Y axis to become taller or fatter, and can also be any of 16 colors.

The sprites have their own chip in memory which controls all of them. This technique is used so that the CUP is free to get on with the other tasks.

Last of the 64 graphics features is its high resolution display. The high resolution screen is 320 pixels by 200. This gives a total of 64,000 individually accessible dots which give very detailed pictures.

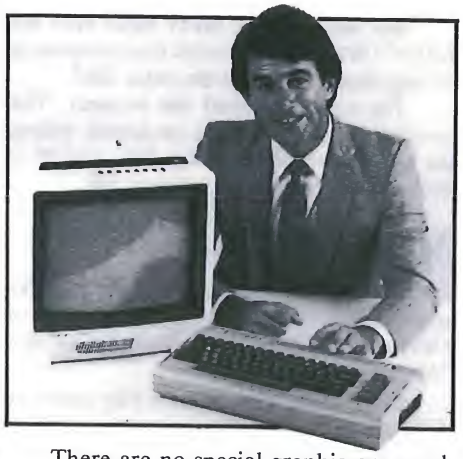
The 64,000 pixels on the 64 are the best of the high resolution screens of its type available to date.

While the Commodore 64 sets new levels of sophistication in personal computing there are a few minuses that should be pointed out.

A Basic Problem

When the PET first came on to the computer scene its BASIC language was considered quite "user friendly". But as more and more machines came on to the market with more and more special commands, the title "user friendly" no longer described the PET's basic. Old-fashioned and crude became more accurate.

The 64 still has the old archaic unexpanded BASIC.



There are no special graphic or sound commands. The clever tricks the Commodore is capable of have to be done the hard way with a lot of peeking and poking or by buying special cartridges.

It is a pity because this is where I believe the Apples and Ataris gain some considerable points.

The Apple has several graphics commands such as HPLOT, DRAW, COLOR, but no sound commands. The Atari on the other hand has both sound and graphics commands such as DRAWTO, SOUND, and SETCOLOR, just a few little niceties, which make programming for the beginner so much easier.

In its favour the 64 has transparent ROMS.

The ROM is where the operating system resides, ROM, meaning Read Only Memory, is supposed to be unchangeable, but on the 64 it is possible to change it.

The advantage is that you can manipulate the 64 BASIC or add to it so you can have your special graphics or sound commands so making it as good as the Apple and Atari.

But reprogramming these ROMS is fairly advanced and something that only experienced owners would understand because the language in which the program is written is very advanced and not user friendly. So it is easy to make a mistake.

I managed to do this to expand and create new commands to give 64 the user friendly graphics and sound facility Commodore left out.

In the US, owners have replaced the BASIC altogether with another language such as PASCAL, FORTRAN, or COBOL. This is the beauty of the Commodore 64.

While it comes with its own ROM you can change it to whatever you want simply because it is transparent. This can be done simply by plugging in a cartridge with the desired language and it loads over the BASIC.

And for other programmers the ultimate question has been asked: "If the 64 is not fussy about which computer language it is using, why not take the 64's operating system and replace it with the Apple or Atari operating systems?" In doing this the 64 thinks it is an Apple or Atari and is able to run all Apple or Atari software.

The thought of this is quite terrifying. If one machine can imitate or emulate all the other computers, what is the use of having them?

Quite simply it is the price. Even though the 64 is only $699 the emulators may cost up to $1000. So it would be cheaper to buy an Atari or Apple instead of a Commodore emulator for the 64.

The 64 owner buying an Apple or Atari emulator is at a disadvantage here. But if one bought a 64 and an IBM PC emulator the purchaser would easily be at an advantage since the cost of the 64 and IMB emulator is half the price of the complete IBM computer.

And the theory of emulating a machine and instantly running the software is all very well as long as the software has been adapted to the 64 conditions. By this I mean screen size.

The 64 has a screen of 40 characters by 25 lines while the TRS-80 has 64 characters by 20 lines. So any TRS-80 software would need to be changed to fit on the 64's screen. For true emulation a special video chip could be created to switch between the most popular screen sizes.

I would recommend that anyone buying a 64 get a monitor or convert their TV for direct video in.

The RF modulator is not very good and the screen is hard to look at. The Atari in comparison is crystal clear. Why, one wonders, can Atari have such good RF modulators and the Commodores such bad ones?

Though using a television screen saves one the price of a monitor, looking at a harsh outline of a character easily tires the eyes.

Using an ordinary television screen it would be hard to distinguish between the n and m for example unless you were close. And that error could make a mess of an otherwise good program. For serious programmers a monitor television set is essential.

If Commodore had spent just a few more dollars on a high quality modulator and a few more hours on an extended BASIC the 64 would be unbeatable in the beginner's market for a long long time.

But it is too late to change. It is a machine for experienced programmers, not for beginners. For the game player the 64 will be one of the best game centres available when enough games are written for it.

Conclusion

My conclusion about the 64 is that it is an excellent computer; a computer that will last a long time on the market — something of a rarity these days when a new, bigger and better one comes out nearly every week.

The 64 may not cause the downfall of many established names in the micro-computer market as predicted, but it will certainly create a new standard in the market — especially in price. And the question is how many manufacturers can meet the challenge?

VIC-20 COMPUTER SOFTWARE LISTING

In order to fit as many programs as possible into our pages, we have had to use codes for some columns, considerably shortening the wording.

The information given for each program is: Title; Memory required to run it (if not standard); Format Type; and Australian Distributor.

The codes we have used are:

Format Type:

R = Cartridge
C = Cassette (tape)
D = Disk

Distributor: (1) Imagineering; (2) Jedko Games; (3) Thorn-EMI; (4) Imagic; (5) Futuretronics; (6) Ozi-Soft; (7) Computer Classics; (8) High Technology; (9) The VIC Centre; (10) Peter Newman; (11) Pittwater; (12) Progressive Software Publishers; (14) Melbourne House.

Name of Game	Memory Size	Format Type	Distributor Code
3D Man		C	14
3D Maze		C	1
3D Time Trek	16K	C	14
Abducter		C	13
Adventure Pack	8K	C	6
Adventure Pack	16K	C	6
Aggressor		R	1
Alien Attack			7
Alien Blitz		C	1
Alien Invasion		C	6
Alien Soccer		C	6
Allied Defence		C	6
Alphabet Soup		C	6
Amok		R	1
Andes Attack	8K	C	13
Annihilator		C	6
Anti-Matter Splatter		C	1
Apple Panic		R	1
Arachnoid			1
Artillery		C	6
Astroblitz		R	1
At The Track		C	6
Avengers		R	7
Black Hole		R	1
Blasteroids		C	6
Blitzkreig		C	13
Bombs Away		C	6
Boxers Corner		C	6
Brainstorm			9
Break Out		R	7
Breakthru		C	2
Bug Blast		C	6
Cattle Round-Up		C	6
Chameleon			1
Chicken Chase		C	6
Chimp Chase		C	6
Choplifter		R	1
Close Assault		C	2
Cloudburst	3K	R	1
Clowns		R	7
Collide		C	1
Computer Baseball		C	6
Concentration		C	1
Convoy Escort		C	6
Cosmic Cruncher		R	7
Cosmic Crusader		C	6
Cosmic Crystals		C	6
Cosmic Debris		C	6
Crawler		C	14
Crazy Kong			7
Cribbage	16K	C	6
Cribbage		C	9
Cricket		C	6
Crossfire		C	1
Crush, Crumble & Chomp		C	1
Dam Bomber		C	1
Datestones Of Ryn		C	1
Deadly Skies			1
Defender On Tri		C	14
Distance Demon			1
Distance Demon		C	14
Dodge Cars		C	14
Dotman		C	14
Draughts	3K		10
Draw Poker		R	7
Dungeon Quest		C	6
Dungeons Of Kal		C	6
Encounter	16K		9
Escape From Orion		C	6
Exterminator		C	14
Fantazia			7
Fire Fire		C	6
Flying Ace		C	2
Football Challenge	8K	C	6
Football Challenge	16K	C	6
Four In One		C	6
Fredericksburg		C	2
Frog			7
Frogger		C	10
Frogrun		C	14
Fruit Flies		C	6
Fuel Pirates		C	1
Fun Addic		R	1
Galactic Abductor	16K	C	14
Galactic Blitz			1
Galactic Crossfire		C	6
Galaxzions			7
Games Pack I		C	6
Games Pack II		C	6
Games Pack Vol I		C	14
Get Four		C	6
Go			11
Gold Fever			1
Gorf		R	7
Grandell Island	16K	C	6
Grandmaster		C	1
Grave Robbers		C	6
Grid Runner		R	1
Grid Runner		R	13
Gypsy		C	2
Harvester			9
Head-On		C	6
Hopper		C	10
Invasion of Orion		C	1
Jewel Raiders		C	14
Journey		C	14
Keyboard Chaos		C	14
Kongo Kong		C	6
Kosmic Kamikaze	3K	C	1
Krazy Kong	16K	C	14
Krell		C	10
Laser Blitz		C	1

Name of Game	Memory Size	Format Type	Distributor Code
Laser Zone	8K	C	13
Life			11
Locomotion	8K		8
Ludwig's Lemon Lasers		C	6
Luna Rescue		C	14
Lunar Res			1
Mancala		C	6
Martian Raider		C	1
Martian Raider		C	9
Masterword		C	6
Matrix	8K	C	13
Maze Of Mikos	8K	C	1
Meteor Run		R	1
Mind Twisters		C	1
Mini Kong		C	14
Mole Attack		R	7
Money Wars		R	7
Monster Maze		R	1
Moons Of Jupiter	8K	C	9
Mosquitoes		C	6
Motor Mania			1
Mow		C	6
Mr Jong			1
Mr TNT			1
Myriad		C	10
Night Rider		C	6
Omega Race		R	7
Orbis		C	10
Othello			11
Outworld	3K	R	1
Pak Bomber		C	1
Paratrooper		C	6
Penny Slot			7
Pharaoh's Tomb	16K	C	14
Pin Ball		R	7
Pinball		C	1
Pipes		C	1
Plattermania		R	1
Predator		R	1
Pro Football	8K	C	6
Puckman			7
Race Fun		C	14
Raceway		C	1
Raid On Fort Knox		R	7
Raid On Isram			1
Raid On Isram		C	10
Rally X			1
Rat Hotel		C	1
Rat Race		R	7
Rebel Defender	8K	C	6
Renaissance	3K	R	1
Rescue		C	14
Rescue At Rigel		C	1
Ricochet		C	1
River Rescue		R	3
Road Panic		R	1
Road Racer		C	6
Road Racer		R	7
Road Toad		C	6
Robotroid		C	14
Sargon Chess		R	7
Satellites & Meteors	3K	R	1
Scorpion			1
Sea Invasion		C	9
Sea Wolf		R	7
Search Fuel		C	14
Sentinels	8K		8
Serpentine		R	1
Shamus		R	1
Shark Attack		C	1
Shark Attack		C	9
Shootout At The Ok Galaxy	8K	C	2
Sidewinder			1
Simon		C	1

Name of Game	Memory Size	Format Type	Distributor Code
Simon		C	1
Skibberdeen			1
Sky Is Falling		R	7
Skymath		C	1
Slap Dab		C	14
Snake Byte		R	1
Snake Out		C	6
Space Attack		C	9
Space Bugs			7
Space Division		C	1
Space Pack		C	6
Space Quest		C	14
Space Station Zulu		C	2
Space Storm		C	10
Speed Maths		R	7
Spider City		R	1
Spiders Of Mars		R	1
Spills And Frills		R	1
Squish 'Em	8K	C	1
Star Battle		R	7
Star Defender		C	6
Starquest	16K		9
Street Sweepers		C	6
Subchase		C	1
Subspace Striker	16K		9
Super Alien		R	7
Super Hangman		C	1
Super Lander		R	7
Super Slot		R	7
Swarm			1
Sword At Fargoal		C	1
Tank Arcade	3K	C	2
Tank War		C	10
Tank Wars	8K	C	1
Tanktrap	8K	C	1
Target Command		C	6
Terraguard		R	1
The Alien		C	1
The Alien		C	2
The Catch		C	14
The Count		R	7
The Pit			1
Tiny Tots Seven		C	14
Torg			1
Trader	16K		9
Trashman		R	1
Traxx	8K	C	13
Trek		C	6
Tronic Cycle		C	6
Tunnel Patrol		C	6
Turmoil		R	1
Type Attack			1
Ultimate Tank		C	6
VIC 20 Games Pack		C	14
VIC Bomber			7
VIC Derby	8K		8
VIC Music Composer	16K	R	3
VIC Music Composer		R	3
VIC Rescue			7
VIC Twist		C	6
Vicat		C	1
Victory Casino		C	6
Victrek		C	1
Video Mania		R	1
Video Vermin		R	1
Voodoo Castle		R	7
Vorrak		C	2
War Games			7
Wizard And The Princess		C	14
Word Hanger			7
Xeno II	16K	C	14
Zok's Kingdom	16K	C	14
Zor	16K		9

COMMODORE 64 COMPUTER SOFTWARE LISTING

In order to fit as many programs as possible into our pages, we have had to use codes for some columns, considerably shortening the wording.

The information given for each program is: Title; Memory required to run it (if not standard); Format Type; and Australian Distributor.

The codes we have used are:

Format Type:

R = Cartridge
C = Cassette (tape)
D = Disk
Basic = BASIC cartridge required

Distributor: (1) Imagineering; (2) Jedko Games; (3) Thorn-EMI; (4) Imagic; (5) Futuretronics; (6) Ozi-Soft; (7) Computer Classics; (8) High Technology; (9) The VIC Centre; (10) Peter Newman; (11) Pittwater; (12) Progressive Software Publishers; (14) Melbourne House.

Name of Game	Memory Size	Format Type	Distributor Code
3D Time Trek		C	14
3D-64 Man		C	1
Adventure Pack I			6
Adventure Pack II			6
Andromeda Conquest	16K	C	2
Annihilator			6
Astroblitz			1
B-Nuclear Bomber	16K	C	2
Backgammon 64		C	1
Benji's Space Rescue		C	1
Blade Of Blackpoole			1
Bomber Attack	8K	C	2
Breakthru		C	2
Bunny 64		C	1
Centipede			5
Chameleon		C	1
Chicken Chase			6
Close Assault		C	2
Coco		C	1
Computer Acquire	16K	C	2
Conflict 2000	16K	C	2
Cribbage			6
Cribbage		D	9
Critical Mass		D	1
Crush, Crumble & Chomp		D	1
Curse Of Ra		D	1
Deadline		D	1
Defender			5
Dig Dug			5
Dnieper River Line	32K	C	2
Donkey Kong			5
Draw Poker	8K	C	2
Empire Of Overmind		C	2
Fantastic Voyage		C	1
Fast Eddie		C	1
Fast Eddie		D	1
Flying Ace		C	2
Fredericksburg		C	2
Frogger		D	1
Frogrun		C	14
Galaxy	16K	C	2
Grave Robbers			6
Gridrunner			13
Gruds In Space		R	1
Gulper		C	1
Guns Of Fort Defiance	8K	C	2
Gypsy		C	2
Hesmon			1
Hexpert		C	14
Horace And The Spiders		C	14
Horace Goes Skiing		C	14
Hungry Horace		C	14
Jawbreaker		D	1
Jumpman		C	1
Jumpman		D	1
Kong		C	14
Lords Of Karma	32K	C	2
Meteor 64		C	1
Midway Campaign	16K	C	2
Moon Buggy		C	14
Moon Dust		R	1
Motor Mania		C	1
Mr Jong		C	1
Mr TNT		C	1
North Atlantic Convoy	16K	C	2
Nukewar	16K	C	2
Planet Miners	16K	C	2
Rally X		C	1
Renaissance		C	1
Repton		D	1
Retroball		R	1
Reversi 1000		C	1
Road Racer Bowler	8K	C	2
Road Toad			6
Robot Panic		R	1
Robotron-2084			5
Shootout At OK Galaxy	8K	C	2
Ski Run 64		C	1
Skibberdeen			1
Skier		D	9
Skramble		C	14
Snake Byte		R	1
Space Station Zulu		C	2
Spider City		C	1
Squish 'Em		D	1
Stargate			5
Super Cassette A		C	14
Super Cassette B		C	14
Sword Of Fargoal		D	1
Tanktics	16K	C	2
Temple Of Apashi		D	1
The Alien		C	2
The Hobbit		C	14
The Pit		C	1
Trashman		R	1
Trek			6
Tronic Cycle			6
Turmoil		R	1
Twist			6
Type Attack		R	1
Ultimate Tank			6
Underworld Of Kryn			6
Upper Reaches		D	1
Vorrak		C	2
Voyager	32K	C	2
Zork I		D	1
Zork II		D	1

JIM LEVY
INTERVIEW

"The only people who are nervous about the development of designers as artists are people who don't know how to handle a situation like that from a business standpoint".

ON FIRST appearances Jim Levy does not look or sound like the man who has helped to set alight the video games revolution around the world. His neat, dark-suited appearance and quiet conversation would be more in keeping with that of a stockbroker or banker rather than one of the leading marketers of home entertainment's most high-tech and razzamattaz industries.

But, subtle demur aside, Jim Levy, is a man of action, As president of Activision, he has set a pace for innovative marketing techniques for video games and his company has grown from nothing in 1980 to become a multi-million dollar business.

Activision's video games have become best-sellers and games such as ***Kaboom, Freeway, Stampede, Barnstorming, Grand Prix, Chopper Command*** *and* ***Pitfall*** *are high amongst the video gamer's all-time favorites.*

Activision has also taken the lead in highlighting the designers behind the video games they produce. Described by one American magazine as a "rockstar approach to video game designers", Activision's policy is to promote its designers as book publishers would their authors or record companies their artists.

Not surprisingly, Levy's own background is both book publishing (with Time Inc) and

the record industry. Unlike many other video game executives, he never spent time with game hardware/software developers such as Atari and Intellivision. Instead he saw video games developing as a new stream in home entertainment and a meeting with dissatisfied game programmers lead him into the industry as an entrepreneur.

Levy recently visited Australia and ***Australian Video and Communications*** *editor and publisher, Geoffrey Gold, caught up with him for a leisurely interview at Futuretronic's space-age offices in Melbourne.*

Away from the hurley-burley of the American market, Levy was happy to talk at length about the growth of video games, his company's innovative marketing attitudes and some surprising news about the possibilities of Australians getting involved in the world marketing of locally designed games.

V&C: Let's start at the beginning. How did you get involved with video games?

Jim Levy: For six years in the record business and prior to that, in the publishing business, I was interested in the development of home computers and video games as new forms of home entertainment for the decades to come. I was introduced to four game designers who at that time were at Atari and the concept of Activision came out of our conversations.

V&C: You've been praised and condemned for your marketing approach to games. One American magazine described it as a "rock star approach to video game designers."

Levy: I think there has been a personal reaction to the situation. You have to understand the way designers are treated at Activision – it's not something that was dreamed up by the marketing people or by me. One of the things all artists believe is most important is public recognition of their work. Very few want to labor anonymously at their craft and, when Activision started, the four designers with whom I started the business had not received any public recognition for their work with Atari. It was something, they told me, that was important to them. We have not, I think, been subject to anything near the excesses of the motion picture or record industries. Ours is more like the book business in the way artists are handled. Like authors, so to speak.

V&C: What similarities are there with other entertainment industries?

Levy: The distribution of games is very similar to distribution in the record and book businesses. High volume, high speed, lots of different titles and the promotion of an individual title much like you would a record or book. From an advertising standpoint, the promotion of games is more like the motion picture business than like the record business – we don't have radio airplay and we don't put artists on tour – and in that way it is more like selling a film.

V&C: So each title has to have an individual approach?

Levy: Yes, every one is individual. But it is an emotional product not a utility product. You have to sell it on the basis of price, performance and features – and bells and whistles and buttons and knobs. You sell it on the basis of how people feel when they play the game, how they respond to it.

V&C: How important then is the Activision brand name?

Levy: There's considerable discussion in the States of the importance of brand names. Activision is very, very well known there and has a high recognition among owners of game systems. However, that only gets you so far. You can't take the name Activision and put it on a weak game and sell it any better than you would with any other name on it. I think what it does do is give people an umbrella under which they say: "I know Activision for a certain standard of quality of design intregrity and I can trust them in terms of what I buy. But still, if I don't like **River Raid** or **Pitfall** or any of the other games, the name of Activision on there won't convince me to buy it." I think what is true in the book *and record businesses is true in video games – the artists, author or designer's name is, in* fact, the brand name. An new book by Harold Robbins or a new record by Men At Work becomes the identity which says "OK, I know their work before and to a certain extent, I know what to expect."

V&C: How far down the track is that development in video game promotion?

Levy: It's already developing that way to a certain extent in the United States. David Crane is a recognised leader having designed **Pitfall** which has been No. 1 since the beginning of November. I suspect David would be recognised in crowds. He's had people stop him in the street and ask for his autograph although he's not a public performer. His publicity is his photograph in the instruction book. We started putting David's name in advertising for **Pitfall** because he was identified with prior work such as **Dragster**, **Fishing Derby**, **Grand Prix** and **Freeway**. So David developed a following and when we went out to promote **Pitfall**, we very nonchalantly said "**Pitfall** by David Crane for Activision" and we got an immediate response from the market place who called and said: "That's great. You're telling us something!"

V&C: We've been noticing that, with a lot of new games coming out, their themes are becoming more and more bizarre. What does that indicate in terms of the industry's direction?

Levy: I think that first of all, you can't make a bad game good just by writing an interesting story to go with it. So you've got to start out with a game that is well done. But games are fantasies and players are a participant in that fantasy and the extent to which the fantasy can be made more complete, the more it enhances the sense of involvement in the game. But the game has to be there to begin with. It's not good enough to say: "OK, this white dot is a marauding pig and this black dot is his spaceship."

V&C: So how do you work?

Levy: Well, with **Chopper Command** and **Star Master** we wrote a screen play after the game had been done in order to more clearly define what it was that was going on. We also did it for **Pitfall**, but not as much as **Pitfall** is fairly easy to understand. With **Megamania** it was a different problem. It's an invaders type game there things are coming down at you from the top and sides of the screen but it's also very abstract. The objects look like everyday kinds of things – tyres, steam irons, bow ties, swiss cheese and stuff like that – and you're being attacked by all these crazy things. We wrote a story line for **Megamania** so that players could understand how it is that this could happen. We said, you are a space cadet out in the galaxy and you've had a hard day. On the way home from the spaceport you stop by a pizza parlor and you have a quart or so of root beer, a pint of chocolate ice cream and you go home, fall asleep and start having nightmares about being attacked by all these things. So it's *called* **Megamania**, a space nightmare. It gave the game a personality and a sense of

"You can't make a bad game good just by writing an interesting story to go with it. So you've got to start out with a game to begin with that is well done." Levy with N. Thurlow, general manager of Futuretronics.

humor and it won an award for the most humorous game of 1982. It's just a bizarre ideal

V&C: In the United States the proliferation of game and computer systems seems to be equally matched by a big increase in software companies.

Levy: You're going to see a lot of guys trying to do too much too soon and run right off the edge. When we started in 1980 there was basically no game business as we know it today. The software was bundled up with the hardware and it was sold and pretty much displayed as a package. There was no software advertising or promotion. We came along and said to the industry: "This is not the way it's going to be in five years time. In five years it's going to be a record business. The tail is going to wag the dog and the strength of the business is going to be in software."

V&C: You began a trend?

Levy: Yes. We were the first independent software company and we were the first to advertise an individual game on TV. We were the first to start redefining and distribution of software, the rules by which it was distributed and merchandised so we could separate it from the hardware. Hardware primarily sells in the last three months of the year, around Christmas, software sells all year round. With our promotion of the software coupled with Atari's own marketing of hardware and so forth, the industry just blew up.

V&C: And that attracted new software competitors?

Levy: Well, it lured a lot of people into the business very quickly, some of whom were not prepared to compete. They didn't have enough money or management discipline or enough creative talent. A lot of the new little guys in the business haven't made a lot of money, they've lost a lot. They all thought that what Activision did looked so easy that there was a goldrush mentality. It wasn't that easy. Out timing was excellent which made it easier and less expensive to establish ourselves. It was much easier to do it first than it has been to do it fourth of fifth. It's now a very expensive ball game to play in.

"We are always interested in talent, from no matter where. It could be from Alice Springs or Darwin." Levy with Video and Communications editor, Geoffrey Gold.

V&C: Your strategies are all based around merchandising game cartridges as if they are books or records. Do you fear increased competition in the United States from cable-TV-delivered video game programming.

Levy: It's interesting that you mention that. It's a real hot topic in the States and we've done a lot of research in the area. We believe fundamentally in the viability of electronic distribution of software as a medium supplementary to the basic retail market. But as far as we can see it will not become the primary delivery mechanism for a long time. You have to change decades of people's habits, or a couple of centuries of their habit of going to the store and buying things, taking it home and putting it on the shelf. We do think that cable, telephone and satellite methods of remote distribution will become increasingly important in the late 1980s. And they will provide a pretty good chunk of additional revenue for software suppliers, more profitable too, as you don't have to go through all the machinations of manufacturing a hard product, packaging it and putting it on a truck to send somewhere. But it will be a more limited vehicle. There are only so many spaces available at one time. A cable, telephone or satellite delivery channel probably won't be carrying more than 25-30 games. But there are going to be 1000 games released each year.

V&C: Unlike other companies, Activision hasn't gone into buying licensing rights for video game themes.

Levy: Licensing to us has always been a short-term solution to a long-term problem. The long-term problem is how do you ensure strong flow of good product for a long period of time. The short-term solution that most people have taken has been to go and borrow a product from somewhere else that's already been established (from arcades, movies and elsewhere) and bring it across. That's short-term because those areas will not be able to supply nearly enough ideas to support the industry's strength five years from now. So, rather than take the quick picks, and in the process probably have forgone some of the market share in the past two or three years, we didn't go out and license. We chose instead to build a talent organisation from the ground up and to build a capability of producing the hits of tomorrow. It's already begun to pay off. You see it in the performance of **Pitfall**, **Starmaster** and **Chopper Command**. We currently have four of the top 10 titles in the States and none of them is licensed. We're investing in our own people. When **Donkey Kong** is gone, it's gone, but creative people like David Crane will be around for years. That, I think, is the difference in our philosophy.

V&C: Of course, as the games market and home computer scene gets larger around the world, you'll have hobbyists who are going to write in and say "would you like to look at my game for distribution" . . .

Levy: Well, they're doing it now.

V&C: And you'll be taking advantage of that creative talent?

Levy: Yes.

V&C: On a world-wide basis?

Levy: It would be worthwhile for us to look at talent on a world-wide basis. We are talking to a number of people in Britain at the moment and establishing some European presence. I suspect that, ultimately, Activision as a world-wide company will have creative capabilities around the world. Now it may well be that we'll pick up some uniquely Australian product for world-wide distribution. We may have our own development organisation in Australia. We don't know yet. To establish your own creative organisation in another country requires a substantial involvement. But we are always interested in talent, from no matter where. It could be from Alice Springs or Darwin.

V&C: How uniquely Australian do you mean?

Levy: It's a cultural factor involved. The vocabulary has to be universal. In this case it's similar to the record business rather than language intensive products like books. For instance, English language records sell very well in Japan and, frankly, the first time I heard Men At Work I thought that they were Police. It didn't matter that they were Australian or English or German or Dutch or American – if the music's good, you like it. The same thing is true in video games. Obviously, if we developed a cricket cartridge it would be very difficult to sell in the US but not here in Australia, South Africa or the UK.

V&C: So send off your demos?

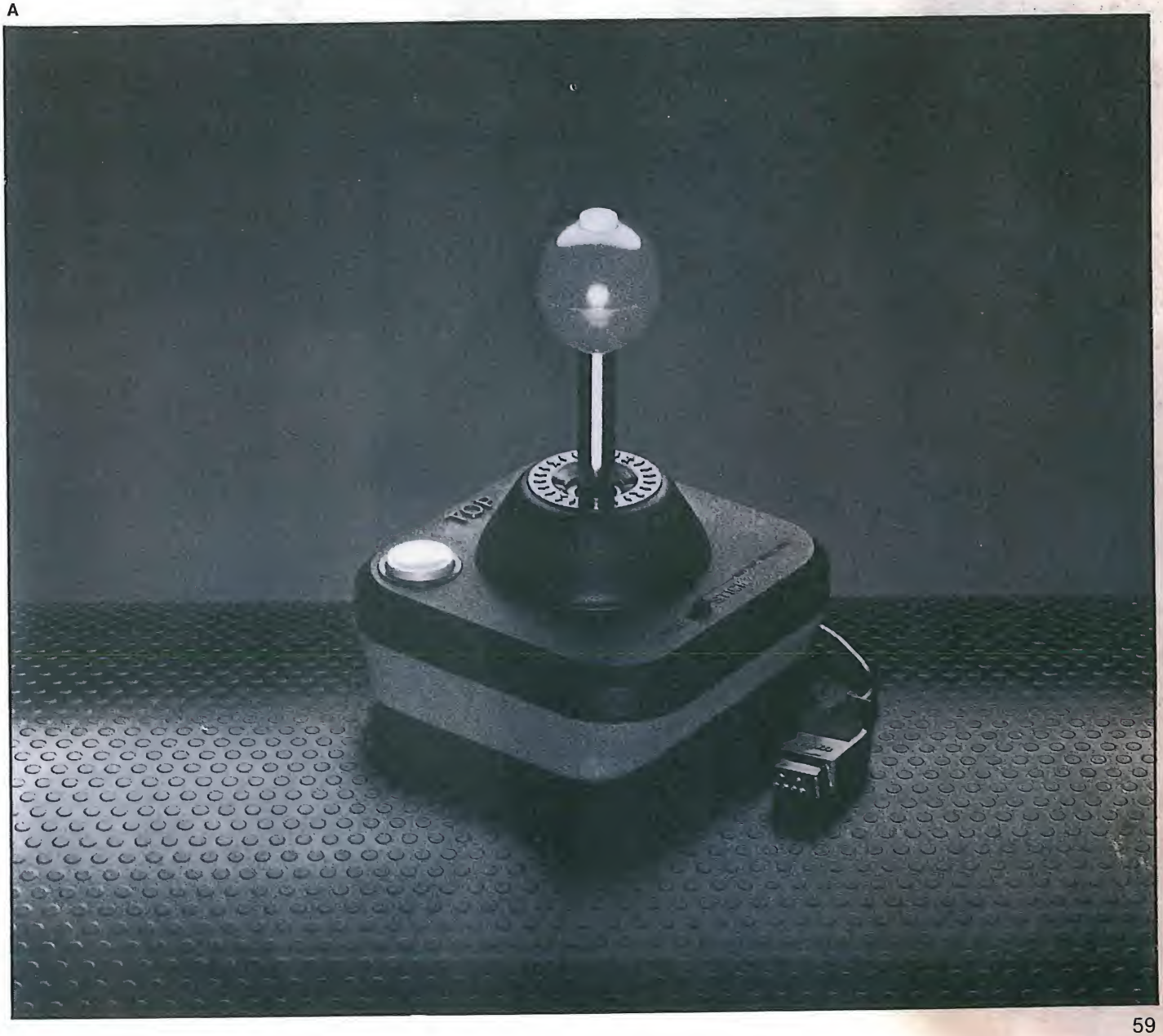
Levy: We do get demos but most people are deceived by just how difficult it is to do this really well. Just like they are deceived by how difficult it is to make a great record. The Atari 2600 is a very tricky piece of equipment, especially to do the kind of things we do with it. It's much easier to work on computers but, in a sense, with the 2600 you have to develop great technical discipline or you'll never get anything done. On a computer you have to develop great creative discipline or you'll have a tendency to overuse the power. It's like having a symphony orchestra and writing a score that says everyone play loud, all at the same time. There's no subtlety in that and no art either. Art is just not a process of putting paint on canvas, it's the process of making it say something. And I think that's where people are deceived about the difference between the 2600 and computers.

Yes, it is easier programming for computers than it is for the 2600. It's much easier and technical limitations are fewer – but it is not any easier to do great work. If anything, it's more difficult because you have to discipline yourself creatively whereas on the 2600 you are usually taking a broad creative vision and disciplining yourself technically to get it done.

VIDEO & COMPUTER ACCESSORIES

Video and computer games have generated a new line of system accessories – particularly products that 'aid' game playing. Here are some of the leading accessories currently available.

A



A. The Wico Red Ball Joystick (for Atari 2600, computers and Vic-20).
B. oZi-Soft's Triga Joystick (for Atari 2600, computers and Vic-20).
C. Atari's 2600 Kid's Controller (for Atari 2600).
D. Arena's Pointmaster Joystick (for Atari 2600, computers and Vic-20).
E. Videoactiv's Compumate Keyboard (for Atari 2600).
F. Videoactiv's QuickShot Joystick (for Atari 2600, computers and Vic-20).
G. Commodore's 1701 Color Monitor.
H. Wico's Arcade-Style Tracball (for Atari 2600, computers and Vic-20).

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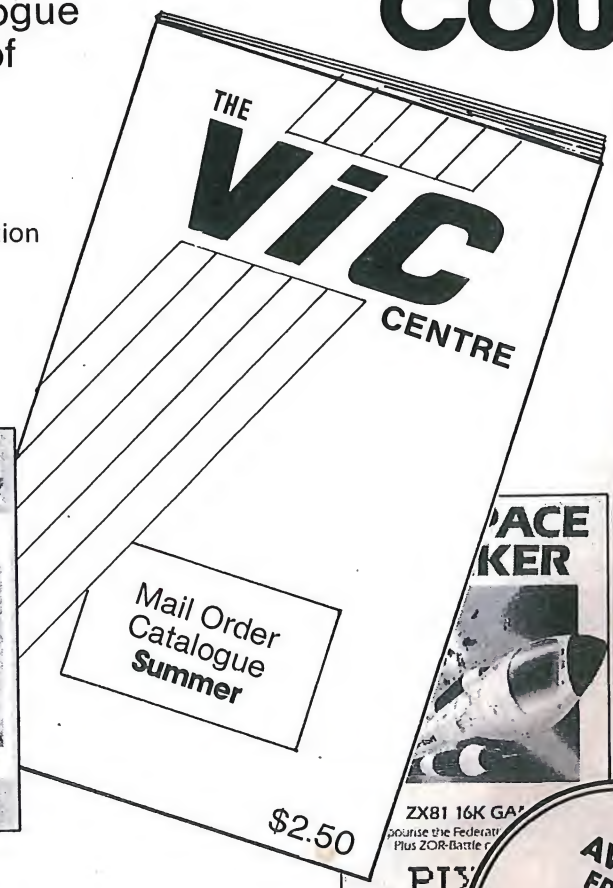

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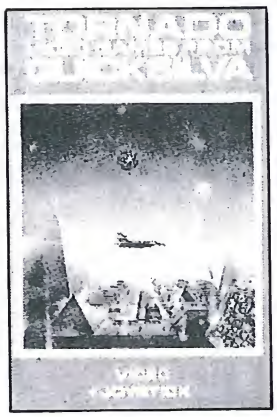

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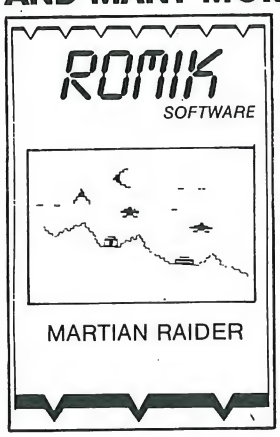

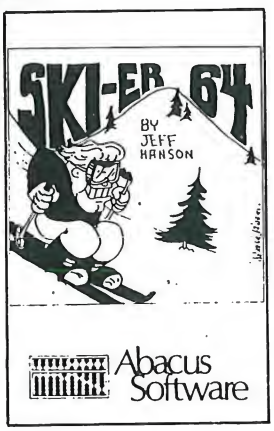

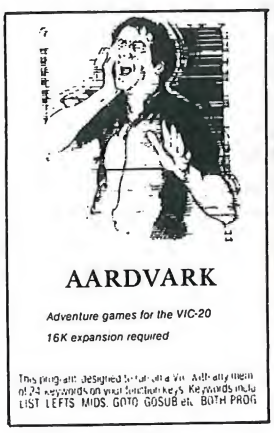

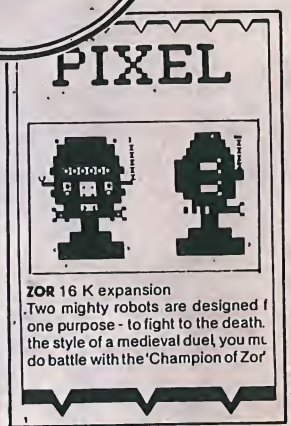

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WA:
S J Pontague & Associates
40 Murray Street,
Perth, WA 6000
Tel: (09) 321 4567
Manager: Syd Pontague
TAS:
Tradepower International
45 Glenvale Crescent,
Mulgrave, Vic 3170
Company Products:
Discwasher Hi-Fi and Computer Care products; Pointmaster Video Game Controller.

BARSON COMPUTERS PTY LTD
335 Johnston Street,
Abbotsford, Vic 3067
Tel: (03) 419 3033
Telex: AA36443 (BARSON)
Executives:
Julian Barson (Managing Director), Greg Johnstone (Software Manager), Z Katz (Marketing Manager), R Napier (Technical Support Manager), S Wazinski (Manager Northern Regions).
Trade Representation:
NSW:
Barson Computers Pty Ltd
331 Pacific Highway
Crows Nest, NSW 2065
Telex: AA74865 (BARSON)
NZ:
Barson Computers NZ Limited
2 Davis Crescent,
Newmarket, Auckland,
New Zealand
Telex: NZ60555 (PENOFF)
Company Products:
Australian distributor of Sirius 1.2, 2.4 and 10Mb, 16-Bit microcomputer and associated software. Sinclair personal computers, Ingersoll Monitors. Australian and New Zealand distributor of BBC Microcomputer and software for education and home.

BBC COMPUTERS
(see Barson Computers)

BIT
(see Comcept Australia)

BOMB
(see Comcept Australia)

CBS ELECTRONICS
15 Blue Street,
North Sydney, NSW 2060
Tel: (02) 339 0255
Telex: AA21246 (COLEREC)
Executives:
Martin Morrow (Managing Director), John McKellar (National Marketing and Sales Manager)
Company Products:
CBS Electronics (a division of CBS Records) distributes the ColecoVision video games system and Adam home computer.

COLECOVISION
(see CBS Electronics)

COMCEPT AUSTRALIA PTY LTD
145 Osborne Avenue,
Clayton South, VIC 3169
Tel: (03) 547 2555
Telex: AA39319 (DES)
Cables: AKOM MELBOURNE
Executives:
Adrian Scott (Managing Director), Richard Hamerton (Director), John Beard (Director), Malcolm Smith (National Sales Director)
Company Products:
Distributors of BIT and Bomb video games

COMMODORE BUSINESS MACHINES PTY LTD
5 Orion Road,
Lane Cove, NSW 2066
Tel: (02) 427 4888
Executives:
Nigel F Shepherd (Managing Director), Abraham Beer (Financial Controller)
Company Products:
Commodore Business Machines Pty Ltd is a wholly owned subsidiary of Commodore International Ltd, a fully integrated manufacturer of home computers, personal computers and small business computer systems. Major products include Commodore VIC-20 home computer, Commodore 64 personal computer, Commodore 8000 series business computer and accessories and software.

COMPUMATE
(see Videoactiv)

COMPUTER CLASSICS
11-15 Falcon Street,
Crows Nest, NSW 2065
Tel: (02) 438 4866
Telex: AA25043
Executives:
Walter Lehne (Managing Director), Gerry Gerlach (Marketing Manager), Roger Davis (Product Manager)
Company Products:
Computer Classics is the home electronics division of Video Classics Ltd, distributing video and computer games, home computers and related computer products.

DATA AGE
(see Computer Classics)

DICK SMITH ELECTRONICS
PO Box 321
North Ryde, NSW 2133

FUTURETRONICS AUSTRALIA PTY LTD
1076 Centre Road,
South Oakleigh, VIC 3167
Tel: (03) 579 2011
Telex: AA36252 (FUTURE)
Executives:
Harry Chojna (Managing Director), Peter Alpar (Managing Director), Noel Thurlow (General Manager), Ron Ward (National Marketing Manager)
Trade Representatives:
VIC:
Futuretronics Australia Pty Ltd
1076 Centre Road,
South Oakleigh, VIC 3167
Tel: (03) 579 2011
Telex: AA36252
Manager: Drew Fyfe
NSW:
Futuretronics Australia Pty Ltd
738 Botany Road,
Mascot, NSW 2020
Tel: (02) 693 1144
Telex: AA73041
Manager: Robert Kidd
NSW:
Futuretronics Indelec Pty Ltd
107-111 Tudor Street,

WA:
Futuretronics Western Australia
2 Cressall Road,
Balcatta, WA 6021
Tel: (09) 349 6111
Telex: AA95536
Manager: Jeff Krasnostein
SA:
Futuretronics South Australia
57 Hampton Road,
Keswick, SA 5035
Tel: (08) 297 5612
Telex: AA87453
Manager: Ray Newberry
SA:
Sargent Electronics Pty Ltd
6 Moseley Street,
Glenelg, SA 5045
Tel: (08) 294 6188
Manager: Jack Costi
Company Products:
Futuretronics is a wholly Australian-owned company dedicated to premium electronic products with exclusive distributorship for Australia and New Zealand for Atari, Activision, Coleco Industries, Entex, Wico, Fidelity Electronics, Gakken Co Ltd and Tomy.

HIGH TECHNOLOGY
87 Swan Street,
Richmond, VIC 3121
Tel: (03) 429 1966
Executives: Joel Gotlib, Michael Hamilton
Company Products:
Computer games and software

IMAGIC AUSTRALIA PTY LTD
Unit 8, 93-99 South Creek Road,
Dee Why West, NSW 2099
Tel: (02) 981 2744
Telex: AA74598 (IMAGIC)

Executives:
C P Milner (Managing Director), M Bollinger (Managing Director), D J Dennis (Director Product Development)
Trade Representatives:
VIC:
Imagic Australia
126 Wellington Parade,
East Melbourne, VIC 3002
Tel: (03) 419 5485
Manager: Stuart Brown
SA:
J P Marcus Pty Ltd
447 Morphett Street,
Adelaide, SA 5000
Tel: (08) 211 7766
WA:
Hunter Distributors
34 Sundercombe Street,
Osborne Park, WA
Tel: (09) 446 4733
TAS:
John Hunt Agencies
45 Victoria Street,
Hobart, TAS
Company Products:
Imagic range of video computer games software compatible with Atari 2600, 400/800, 600XL/800XL, Intellivision, VIC-20, ColecoVision, Philips G-7000. Imagic range of personal computer entertainment software compatible with VIC-20, Commodoe 64, Apple II, Apple III, IBM P/C, Texas Instruments. Link range of P/C business software including Datafax datebase information system compatible with Apple, IBM. "Wine Cellar" wine inventory system. Imagic accessories.

IMAGINEERING
3/579 Harris Street,
Ultimo, NSW 2007
Tel: (02) 212 1411
Telex: AA74349 (IMAGIN)

Executives:
P Woolley (Marketing Manager), S Mitchell (Operations Manager)
Company Products:
Imagineering is Australia's largest manufacturer and distributor of video computer games. Imagineering exclusively represents the major USA entertainment software companies (HES, Sirius, Broderbund, Online, UMI, Epyx, Creative, Commervid) supporting all the popular home computers – VIC-20, Commodore 64, Apple II, Atari 400/800, 600XL/800XL and Atari 2600.

INTELLIVISION
(see Mattel Electronics)

JEDKO GAMES
18 Fonceca Street,
Mordialloc, VIC 3195
Tel: (03) 587 1928
Telex: AA31255
Executives:
John Edwards, Alan Edwards, John Morgan
Company Products:
Board games, microcomputers and computer games

JOHN SANDS ELECTRONICS
210 Albert Road,
South Melbourne, VIC 3205
Tel: (03) 699 5633
Telex: AA34206

MATTEL ELECTRONICS
461 Plummer Street,
Port Melbourne, VIC 3207
Tel: (03) 645 2422
Telex: AA32085
Executives:
Don Howell (Managing Director), Andrew Syme (National Marketing Manager), John Delaney (National Sales Manager)
Trade Representation:
NSW:
Mattel Electronics
17 Myrtle Street,
North Sydney, NSW 2060
Tel: (02) 922 3366
Manager: Tony Haslehurst
VIC:
Mattel Electronics
461 Myrtle Street,
Port Melbourne, VIC 3207
Tel: (03) 645 2422
Manager: Stan Dali
SA:
Mattel Electronics
156 Fullerton Road,
Rose Park, SA 5067
Tel: (08) 332 3622
Manager: David Crowley
QLD:
Mattel Electronics
Level 2, 973 Fairfield Rd.
Moorooka, QLD 4105
Tel: (07) 392 3477
Manager: Steven Johnson
WA:
Mattel Electronics
33 Teddington Street,
Victoria Park, WA 6100
Tel: (09) 362 6455
Manager: Lance Primrose
TAS:
Ray Woodruff Agencies
7 Mimosa Court,
Berriedale, TAS 7011
Tel: (002) 49 1550
Company Products:
Intellivision video games systems and Entertainment Computer System and software and accessories.

MELBOURNE HOUSE AUSTRALIA
Suite 4, 75 Palmerston Crescent
South Melbourne, VIC 3205
Tel: (03) 690 5336
Telex: AA34785
Executives:
Alfred Milgrom, Naomi Besen
Company Products:
Computer software

MILTON BRADLEY AUSTRALIA PTY LTD
9 Sydneygate,
Waterloo, NSW 2017
Tel: (09) 698 5455
Telex: AA74351
Executives:
David G Pumphrey (Managing Director), Graham Giles (National Sales Manager), Ed Wynne (Sales Planning Manager)

Trade Representation:
NSW:
Milton Bradley Australia
9 Sydneygate,
Waterloo, NSW 2017
Tel: (02) 698 5455
Telex: AA74351
Manager: Issy Sher
VIC:
Milton Bradley Australia
87 King William Street,
Fitzroy, VIC 3065
Tel: (03) 419 4566
Manager: Ken Haymes
SA:
Milton Bradley Australia
PO Box 369
Glenelg, SA 5045
Tel: (08) 294 2863
Representative: Gerald Marshall
QLD:
Milton Bradley Australia
PO Box 89
Clayfield, QLD 4011
Tel: (07) 229 1955
Representative: Chris Reid
WA:
Milton Bradley Australia
PO Box 220
Greenwood, WA 6024
Tel: (09) 328 3877
Representative: Ray Diggins
TAS:
Milton Bradley Australia
Room 5, 116A York Street,
Launceston, TAS 7250
Tel: (003) 31 7266
Representative: Paul Ellis
Company Products:
Vectrex computer game system and other electronic games

OZI-SOFT
7th Floor, 50 Clarence Street,
Sydney, NSW 2000
Tel: (02) 29 6330
Executives:
K Bermeister (Manager Director), L Bermeister (Director)

Company Products:
Manufacturer and distributor of computer games, educational programs and small business utilities available for VIC-20, Commodore 64 and Atari computers. Also publishers and distributors of Australian programs.

PARKER BROTHERS
104 Bourke Road,
Alexandria, NSW 2015
Tel: (02) 698 9888
Telex: AA26083 (TOLEX)
Executives:
Kenneth F Chapman (Managing Director), John Wallace (Finance Director), Paul Gibson (Operations Manager), Bill Barrass (Marketing Manager), Kevin Coleman (International Director).
Trade Representation:
NSW:
Parker Brothers
104 Bourke Road,
Alexandria, NSW 2015
Tel: (02) 698 9888
Telex: AA26083
Manager: Stewart Robertson
VIC:
Parker Brothers
1632 Ferntree Gully Road,
Knoxfield, VIC 3180
Tel: (03) 763 8200
Telex: AA33935
Manager: Kevin Coleman
SA:
Parker Brothers
85 Orsmond Street,
Hindmarsh, SA 5007
Tel: (08) 46 8040
Manager: Csaba Nagy
QLD:
Parker Brothers
Pacific Highway,
Slacks Creek, QLD 4217
Tel: (07) 208 7211
Manager: Kevin Stanley
WA:
Parker Brothers
14 Hector Street,
Osborne Park, WA 6017
Tel: (09) 446 8499
Manager: Andy Bruvelis
TAS:
John Hunt Agencies
45 Victoria Street,
Hobart, TAS 7000
Tel: (002) 34 8916
Manager: John Hunt
Company Products:
Parker Brothers are the producers of board games such as Monopoly, word and number games such as Boggle and Hand Held Electronics such as Merlin. With 100 years of experience in games manufacture and marketing expertise, video games to suit the major hardware systems are a natural extension. Games will be available to suit Atari 2600, Intellivision, ColecoVision as well as software for personal computers such as the VIC-20.

PETER NEWAN
6 Matsen Close,
Booragoon, WA 6154
Tel: (09) 364 9242

PITTWATER
22 Carter Road,
Brookvale, NSW 2100
Tel: (02) 939 6760

PHILIPS CONSUMER PRODUCTS
1092 Centre Road,
Clayton, VIC 3168

POINTMASTER(see Arena Distributors)

POPULAR HOME PRODUCTS
46 Pyrmont Bridge Road,
Pyrmont, NSW 2009
Tel: (02) 660 0011
Telex: AA24810 KTEL)
Executives:
R. Burley (Secretary), T J Tambakis (Marketing Manager), G Jones (National Sales Manager)
Trade Representation:
VIC:
Popular Home Products
969 Burke Road,
Camberwell, VIC 3124
Tel: (03) 813 1744
Telex: AA32683
Manager: J Vale
SA:
Popular Home Products
13 Sydenham Road,
Norwood, SA 5067
Tel: (08) 42 4851
Telex: AA89510
Manager: A Anderson
QLD:
Popular Home Products
301 Coronation Drive,
Milton, QLD 4064
Tel: (07) 36 5066
Telex: AA42898
WA:
S R Jones & Cop
C/- Transway Freight Service
Cnr Belmont Ave & Noble St,
Kewdale, WA 6105
Tel: (09) 451 6326
Telex: AA95768
Manager: S Jones
Company Products:
Xonox video games and other houseware and music products.

PROGRESSIVE SOFTWARE
1 Coleridge Road,
Pymble, NSW 2073
Tel: (02) 44 6393
Executives:
Andrew Carroll (Manager)
Company Products:
Distributors of software and games for VIC-20 and Commodore 64 including Llamasoft and Bubble Bus ranges.

SEGA COMPUTERS
(see John Sands Electronics)

SINCLAIR COMPUTERS
(see Barson Computers)

SPECTRAVIDEO
(see Videoactiv)

TANDY ELECTRONICS
PO Box 229
Rydalmere, NSW 2116

TELESYS
(see Computer Classics)

TEXAS INSTRUMENTS
9 Byfield Street,
North Ryde, NSW 2113

TIGERVISION
(see Videoactiv)

THORN EMI VIDEO AUSTRALIA
301 Castlereagh Street,
Sydney, NSW 2000
Tel: (02) 2 0912
Telex: AA24182 (EMIREC)
Cables: EMIRECORD
Executives:
Les Smith (Managing Director), Ros Martin (Financial Controller), Graham Mills (National Sales Manager)
Company Products:
Computer games software for Atari computers, VIC-20, Commodore 64, Apple and Texas Instruments computers.

THE VIC CENTRE/CW ELECTRONICS
416 Logan Road,
Stones Corner, QLD 4120
Tel: (07) 397 0888
Telex: AA40811 (CWELEC)
Executives:
Brian Beamish (Manager), Bill Brown (Commercial Retail Manager), Lance Farrell (Service Manager), Kathy Beamish (Dispatch Manager)
Company Products:
Computer games suitable for the VIC-20 and Commodore 64 computers from overseas suppliers such as Abacus (USA), ICS (UK) and Computer World (Holland).

VECTREX
(see Milton Bradley)

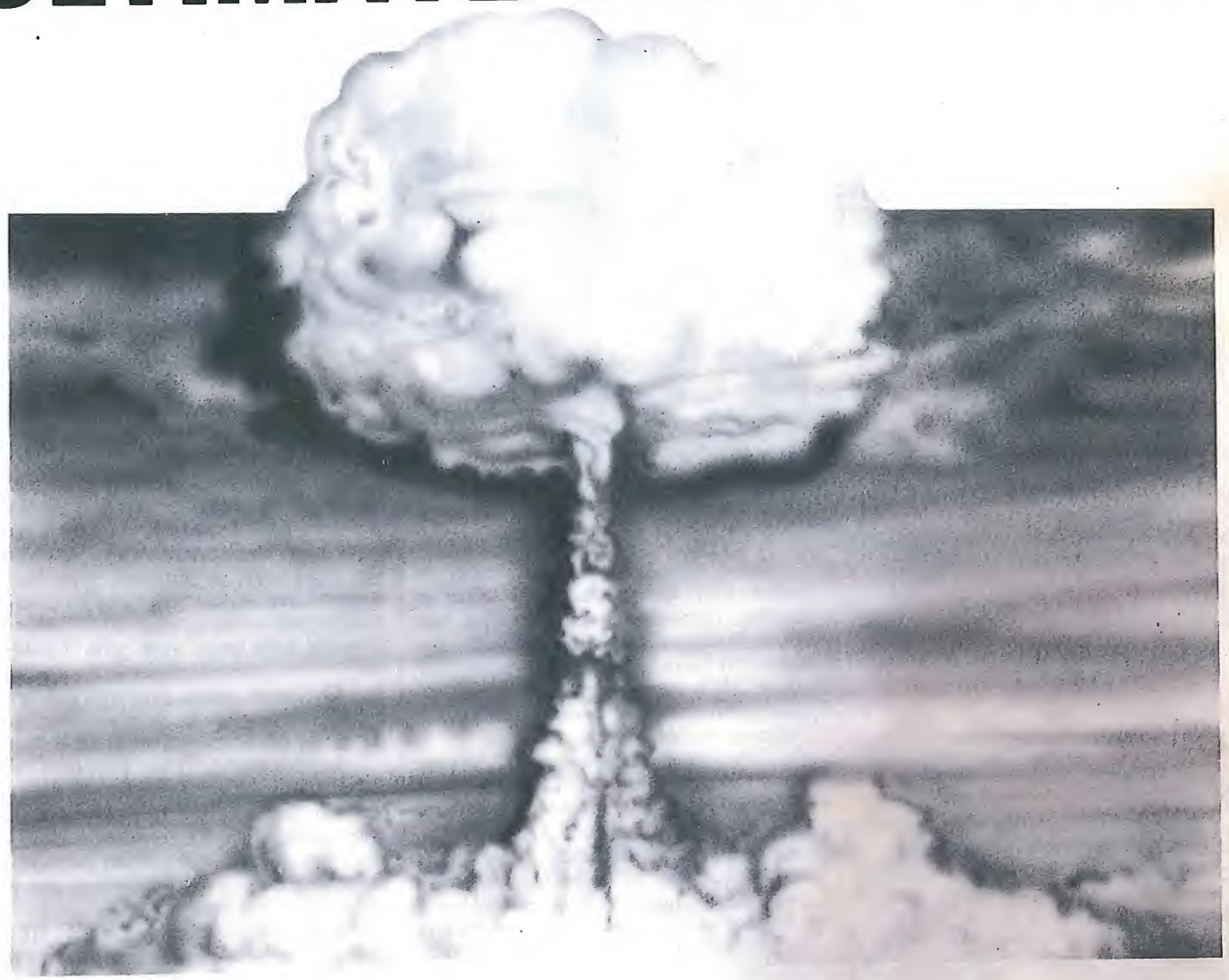
VIDEOACTIV ELECTRONICS
70 St Kilda Road,
St Kilda, VIC 3182
Tel: (03) 537 2000
Telex: AA36068 (MANTEL)
Executives:
M Herszberg (Managing Director)
Trade Representation:
NSW:
Videoactiv
PO Box 474
Edgecliff, NSW 2027
Tel: (02) 328 1190
Telex: AA70041
Manager: A King
SA:
Marcus and Associates
447 Morphett Street,
Adelaide, SA 5000
Tel: (08) 211 7766
QLD:
Sunstate Toys
3 Marie Street,
Milton, QLD 4064
Tel: (07) 369 0496
Manager: R Franklin
WA:
Jerdon Agencies
25 Gladstone Street,
East Perth, WA 6000
Tel: (09) 328 8299
Telex: AA93181
Manager: K McErvale
TAS:
Dennington Enterprises
46 Canning Street,
Launceston, TAS 7250
Tel: (003) 31 8551
Company Products:
Spectravideo Atari-compatible video games, hand-held LCD games, Quickshot deluxe joystick controller, Compumate compute keyboard for Atari 2600, ColecoVision game adaptor for SV318/SV328 personal home computers; Tigervision Atari-compatible video games and hand-held LCD games; and Videoactiv games pack.

WICO (see Futuretronics)

XONOX (see Popular Home Products)

Z-TRONICS (see Comcept Australia)

ULTIMATE VIDEO GAME



Video games, like most games, allows us into the world of fantasy. The kicks we get out of space wars and missile battles give us the opportunity to let off steam and confront a personal challenge.

But what about the real world of combat. Here Don Dennis, a games marketer himself with army service in computers and weapons development, provides a frightening insight into what might happen when the "big one" goes off.

THE console has a standard keyboard with a numeric pad and a line of 20 dedicated function keys. A joystick is used to allow a control cursor to be positioned on the full-color screen. A lightweight headset connects you with the global communications network.

The hardware's uncluttered simplicity belies the power gained from a maze of data links integrated via the command and control computer with its 20 meg 96 bit parallel CPUs and online storage exceeding a thousand megabytes.

The comprehensive displays and the graphics quality are a tribute to the teams of programmers and engineers who have for years worked to perfect the system.

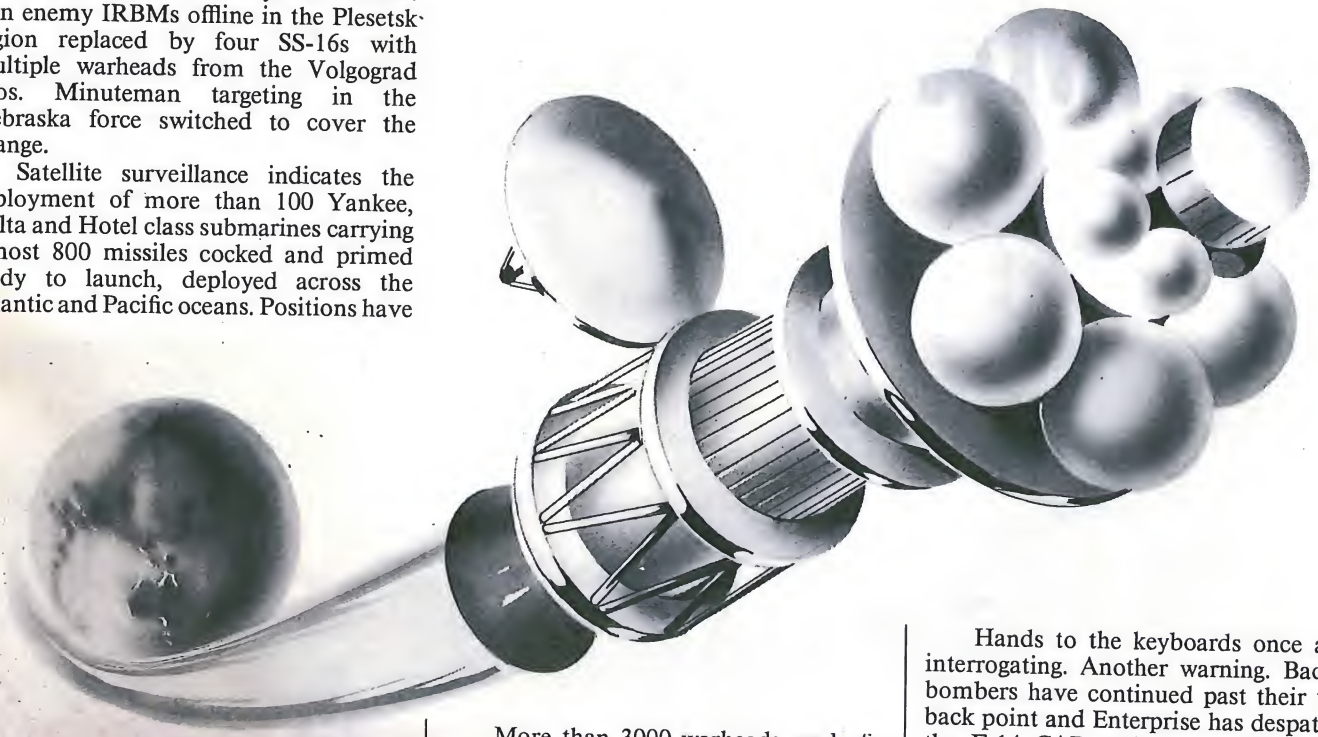
Special clearance is needed to enter the area. Once seated the system will check on you to verify that your reactions are on the ball by running a series of numerical sequences for you to match. A simple but effective way of limbering up the mind for the hours ahead and keeping you on your toes in moments of boredom.

The computer verifies that you have command then flashes the combat status of both forces on the screen. The enemy's numerical advantage is worrying although this should be offset by the quality and technological superiority of your own. Still the thought of a 50 megaton blockbuster missing by a few kilometres evokes little comfort. Those babies are so big they don't have to be accurate. They're designed to level a mountain range just to get at your command centre buried in concrete hundreds of metres below the earth's surface.

You glance around the control room with its carefully planned decor designed to keep the occupants relaxed but alert. The atmosphere is comfortable, the colors of the walls concealing the fact that beyond the thin veneer of paint are hundreds of metres of reinforced concrete designed to absorb a near miss by a nuclear warhead.

Updates come in every few minutes. Ten enemy IRBMs offline in the Plesetsk region replaced by four SS-16s with multiple warheads from the Volgograd silos. Minuteman targeting in the Nebraska force switched to cover the change.

Satellite surveillance indicates the deployment of more than 100 Yankee, Delta and Hotel class submarines carrying almost 800 missiles cocked and primed ready to launch, deployed across the Atlantic and Pacific oceans. Positions have been relayed to your Los Angeles class hunter killers who are silently tagging the enemy missile boats.



A balance of terror waiting to be tipped.

An infra-red trade detected by Milsat orbiting over the Indian Ocean and relayed by Pine Gap signals a missile launching. The computer immediately projects the initial trajectory on the screen. A low, almost sub orbital shot good for perhaps 1½ revolutions in an unusual North South orbit. Launch site was the Tyuratam strategic test centre, not a first line operational base, indicating that it was yet another research shot.

Still, you tag the computer readout to give continual updates throughout the flight and punch the information through to CIA Washington.

The screen remains relatively calm with only an occasional forces update being displayed:

SAC B-52s airborne from Clark AFB in the Philippines. Routine deterent readiness flight. 150 warheads.

SAC F-111s airborne from the UK based 48th Tac Wing. 80 warheads.

Trident and Polaris forces on routine station. 500 warheads.

Minuteman ICBM at two minutes readiness. 900 missiles with a total of 1800 warheads.

Titan 11 ICBMs at five minutes. 150 warheads.

Pershing missiles attached to NATO Europe. 400 warheads.

More than 3000 warheads ready for action with almost as many again in reserve. Considering the smallest was about the size of the crude firecracker that destroyed Hiroshima and the largest contained 300 times the explosive equivalent means that there is an awesome amount of firepower waiting for the go signal.

The screen beeps a warning drawing attention to the missile launched from Tyuratam now five minutes downrange with trajectory confirmed as 1.4 orbits in near polar plane. No likely threat as the impact area will be in the Indian Ocean. The CIA link indicates that it is most likely to be and advises that they are tracking. A section of F-14s in on alert airborne ready to intercept if the Backfires get within launch range of their cruise missiles.

An additional section of 15 SS-18s on line at the Chita complex covered by targeting Minutemen from the Idaho reserve.

The Baltic sonic detection line reports the passager of another group of four Yankee class nuclear submarines. Units of the first reserve putting to sea which means the entire force except for two boats laid up in dock was now deployed.

A shiver runs down the spine as the computer summarises the position. Forces have been building up for two days. Missiles coming on line to be covered by reserve forces until there are no longer any reserves left to cover with.

Milsat sounds a warning. SS-18s in the Plesetsk sector have been elevated from their silos. A routine cycling perhaps, however this brace of nuclear destruction has special meaning for the group is known to be assigned to destroy your position. All missiles have a gigantic 50 megaton warhead atop their blunt snouts.

Hands to the keyboards once again interrogating. Another warning. Backfire bombers have continued past their turnback point and Enterprise has despatched the F-14 CAP to intercept. The Victor hunter killer submarines have accelerated and are still covering your Trident subs. A gnawing ache grips your guts. Could it be?

The screen comes alive with red lights. Enemy forces up to primary alert and increased radio activity from all centres.

Milsat howls. The Tyuratam test vehicle has maintained its course for Central Australia. It's suddenly split into three segments before re-entry. A multiple re-entry vehicle with trajectory projections indicating Pine Gap, Nurarrunga and the North West Cape as targets.

Infra red detectors aboard Milsat indicate missiles launched from the Plesetsk site. Twelve SS0-18s. Trajectory plot shows they've got your name written on their warheads.

A sudden panic grips you and sweat breaks out on your forehead. The urge to get the hell away from the place is strong. You want to run and hide somewhere. Those thick reinforced concrete walls, once so reassuring and protective, take on all the friendliness of an Egyptian tomb. You calm down realising that it would take almost 20 minutes just to get to the surface. Just in time to see the first warheads burst like sinister blossoms over the Cheyenne mountains.

Your remain at the console, fear gripping your insides. You have only minutes left and in that time you must do all you can to inflict maximum damage on the enemy. Forces to full alert and launch sequences commenced waiting for the final go signal from the commander in chief. You sit waiting for that ultimate instruction.

Whatever happens you must play the game until the very end.